

AN EMPIRICAL INVESTIGATION
OF FACTORS RELATED TO THE
DRUG-FREE WORKPLACE FOR GENERAL CONTRACTORS

BY RICHARD J. COBLE

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Abstract of Dissertation Presented to the Graduate School
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AN EMPIRICAL INVESTIGATION OF FACTORS RELATED TO THE
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FOR GENERAL CONTRACTORS

By
Richard J. Coble

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Chairperson: Weilin Chang
Major Department: College of Architecture

Substance abuse on the job has been identified as a serious and growing problem in the United States. In the construction industry, recent Federal and State laws have been enacted establishing incentives for developing a drug-free workplace (DFW). Construction companies are responding to these incentives in different ways and with different degrees of success.

It was hypothesized that communication, which has been shown to be critical to safety programs, is an important factor in developing DFW programs. This study examines DFW communication displayed by the membership of the Florida Associated Builders and Contractors (ABC).

An extensive literature review indicated that DFW programs in the construction industry have received little attention. This conclusion was corroborated by interviews conducted with a variety of industry and association leaders.

This empirical investigation began with a structured prequalification interview with 208 ABC organizations. Those agreeing to participate further completed a separate detailed questionnaire about their general safety program, which included DFW. One subset of the participants was then exposed to monthly information about DFW programs and communication methods. The other subset was not contacted during the period. A structured interview was conducted with both subsets at the end of the four-month period.

This research has shown that a construction company's size is significantly related to the presence of several communication and awareness schemes. The study also demonstrated that management's commitment and compliance to a DFW program mandated by a governing authority is independent of size. Most importantly, it was found that although 98 percent of the surveyed contractors' top management confirmed that they were committed to a DFW, in reality, they were doing little to achieve this goal.

A model was developed to evaluate DFW interrelationships. It is concluded that the system of factors or incentives that leads companies to develop a drug-free workplace have identifiable variables that interact; both negatively and

positively, with the positive possibly working together in a synergistic sense. It is concluded that the management awareness and financial benefits associated with a DFW ultimately will be the forces that drives the current construction industry into a drug-free industry.

CHAPTER I INTRODUCTION

"There is a time and procedure for every matter" (Ecclesiastes, 8:6). This statement was made approximately 3,000 years ago when time and procedure were made priorities in life. Today, the emphasis on time and procedure is one of the keys to success in the construction industry. As a result of recent changes in laws coupled with new methods of construction, the time for modifying procedures with respect to the construction drug-free workplace (DFW) is here. The responsibility for this change falls directly on management. "Management must accept the responsibility for changing. There is no scapegoat such as Quality Control inspection problems, union restrictions and interference, or unmotivated craftsmen" (Borcherding, Sebastian, & Samuelson, 1988, p. 86). This study investigates factors related to changes in operational procedures by contractors' safety managers to include a drug-free workplace program.

The DFW is not only a reaction to the legalities of the drug problem, it is a response to the image of drugs within the construction industry. In harmony with this concept, Tony Edmonds, vice president of the Air Conditioning Contractors of America (AACA) states, "We either want to get these people out

of the industry, or help them clean up and get straight. We want to help clean up the industry" (Checkett-Hank, 1991, p.1).

The DFW is a subject of high emphasis throughout the state of Florida and nationally, with special emphasis on Workers' Compensation (WC). The definition of Workers' Compensation is a no-fault insurance plan for dealing with industrial injuries, whereby injured workers forfeit their right to sue their employer for the costs of the injury, in return for which they gain paid medical treatment and compensation for the time off from work through insurance provided by the employer (Levitt and Samuelson, 1987). The new State of Florida Workers' Compensation law will give a credit on WC premiums for contractors who fulfill State of Florida requirements for a DFW. This new legislation will mean the potential of tens of thousands of dollars in savings for companies that have several hundred employees. The State also will disallow WC benefits for workers testing positive after being injured on a construction site.

In contrast to the State of Florida's rebate on WC, the Federal Government has determined that in order for an administrative agency to successfully enforce its regulations, fines must be imposed on those in violation. Thus, the Federal Government has taken aggressive action in respect to the area of safety. Fines imposed for Occupational Safety and Health Administration (OSHA) violations went up 7-fold in 1990 (U.S. Department of Labor, 1991).

With heavy fines in place and Workers' Compensation rebates becoming available, pressure is on the construction industry to have a DFW. The major steps taken by both the State and Federal Governments regarding safety and the DFW will have consequential effects on cost and scheduling, as the drug-free workplace programs (DFW programs) cost time and money to initiate and enforce. Yet, "employers which institute drug and alcohol abuse workplace policies will gain protection from potential legal liability and improve their workplace environment" (Rogers & Soloff, 1990, p. 28). Many construction companies are just now putting such DFW programs into place. The DFW is now on the cutting edge for contractors who are making such changes within their companies in an attempt to attain more profit by cutting Workers' Compensation costs.

In a recent Gallup survey of 1,007 full-time workers nationwide, "49 percent of workers acknowledged that illegal drug use occurs in their own workplaces," and "41 percent said drug usage by employees in their organization 'seriously affects' their 'ability to get the job done'" (The Gallup Organization, 1990). Statistics such as these justify the strict legislation recently enacted by the government. Also, the present need for contractor conformance to these new requirements is self-evident.

Communicating with respect to the DFW is one of the current challenges which is occurring in the construction

industry, but as has been so aptly put: communication is one of the most elusive organizational variables (Guevara & Boyer, 1987). In a review of the communication problems within the construction industry, the basis of the problem must be understood, which is, "Communication systems are the central nervous systems that make it possible for hundreds of people to do dozens of tasks in an integrated and orderly way, and to coordinate their efforts and skills toward a common goal" (Guevara & Boyer, 1987, p. 551). Because of the ever-changing dynamics within the industry, the view of this common goal often becomes clouded.

Statement of the Problem

Nationwide emphasis on drugs in the workplace has created the environment that has spawned the construction industry's interest in the DFW. The construction industry is faced with new large Federal fines for Occupational Safety & Health Administration (OSHA) safety violations. In conjunction with Workers' Compensation credit for contractors having a DFW, contractors will be forced to bring their programs into compliance or suffer monetary loss. As dictated by the State of Florida, there are some requirements that are necessary for all contractors to follow to be in compliance. In parallel with the new State of Florida requirements for a DFW, the Federal Government also has taken a lead in mandating that general contractors working on Federal projects must have a drug-free workplace. Under the National Drug Control Strategy

issued by the White House in September of 1989, it is stated, "The Federal Government will also move quickly to implement and strengthen regulations for the Drug-Free Workplace Act of 1988, which requires Federal general contractors to have drug-free workplace plans in effect" (National Drug Control Strategy, 1989, p. 2). The question is, how are contractors dealing with these recent State requirements?

Objective of the Study

The objective of this research was to collect and analyze data that will assist the construction industry in understanding what factors are involved in developing a DFW. The areas of focus were to determine if the companies are:

- 1) aware of new changes in the Workers' Compensation Law relative to a DFW;
- 2) interested in improving safety through having a DFW program;
- 3) aware of the new DFW requirements;
- 4) interested in creating a DFW;
- 5) interested in pursuing Workers' Compensation credits;
- 6) communicating DFW requirements;
- 7) training their supervisors with regard to the company's DFW program; and
- 8) identifying the specific areas that effect the implementation and maintenance of a DFW program.

Hypotheses

A variety of factors or components related to DFW program implementation were investigated. Size of organization (measured by number of employees) was evaluated with respect to the significance of the adoption of a DFW program. From the initial contact, with the potential contractor survey participants, the size of the organization appeared to have direct bearing as to their DFW interest. Because of the apparent importance of contractor size, the following hypotheses were tested:

- H₁: Incidence of DFW pre-job orientation is independent of contractor size.
- H₂: Incidence of drug testing for new employees is independent of contractor size.
- H₃: Incidence of communicating the dangers of prescription drugs is independent of contractor size.
- H₄: The incidence of DFW training programs for supervisors is independent of company size.
- H₅: DFW program and Employee Assistance Program (EAP) files are only being kept for the larger contractor.
- H₆: The incidence of overt management commitment to a DFW is independent of company size.
- H₇: The incidence of drug testing for all employees is independent of company size.

- H₈: The incidence of availability of EAP is independent of company size.
- H₉: Incidence of drug testing notification is independent of company size.
- H₁₀: Lack of information is slowing the State of Florida approved drug-free workplace program (SOFA DFW program) for all size companies.
- H₁₁ The rate rebate has no effect on a company's participation in a DFW program.
- H₁₂ The loss of Workers' Compensation benefits for an employee testing positive after an accident will have no effect on a contractor's participation in a DFW program.
- H₁₃ A contractor's having a good safety program has no effect on the development of a DFW.
- H₁₄ Communication is not an important consideration for contractors in developing a DFW program.
- H₁₅ The constraints of (a) cost of starting a DFW program; (b) lack of time necessary; (c) lack of qualified personnel; and (d) lack of information on the DFW, are not having a major effect on slowing development of a DFW program.

The data generated from the questionnaires was used to test the first ten hypotheses using a chi-square statistic. The chi-square was used because it describes whether or not a significant difference exists between the observed number of

cases falling into each area versus the expected number of cases, based on the null hypotheses.

The regression analysis was used to test the remaining five hypotheses because this type of analysis will determine if a dependent variable is a function of one or more independent variables. The results of such an analysis would give an indication of possible synergy if significant correlations were identified.

Summary of Findings

The findings in the first ten hypotheses indicated that the size of the company had a direct relationship to the company's involvement in a DFW program. Hypotheses 11 and 12, which dealt with incentives, did not show that contractors were effected by incentive motivation.

Hypothesis 13 was not rejected because the correlation between safety and the DFW was not inherent in either the descriptive or the analytical statistics. Relating to Hypothesis 14, contractors are not making a communication effort pertaining to the DFW. This was shown by the responses to questions relative to communication, which showed their lack of educating employees of a DFW.

The constraints as outlined in Hypothesis 15 had a minor effect on the development of a DFW. The descriptive statistics showed indications that top management is committed to a DFW, but their companies are moving cautiously in putting a DFW program into effect. This researcher believes this

condition will continue as long as the State of Florida is vague as to what is going to be acceptable is constituting a DFW.

Overview

Chapter 2 provides a literature review on the DFW. The review brings forth information on the history of the DFW. Current governmental information pertaining to the DFW is provided in combination with staggering statistics of accident rates within the construction industry. Also, a review of the research currently being conducted is provided.

The methodology used to conduct this research is described in Chapter 3. The group tested was made up of some of the leading organizations within the construction industry. The general contractors making up this group were willing to participate in this study and were provided a baseline questionnaire. The baseline questionnaire provided insight into the general safety culture, and in particular, the DFW within each company. Monthly exchanges were then administered for four months. The monthly exchange was conducted to identify what progressive steps, if any, companies were taking to implement a DFW. A closeout survey was then given to consolidate the investigation into one cohesive unit. Finally, a validity survey was executed to test the merit of the model used in the research.

Chapter 4 provides the results of the study. The baseline questionnaire yielded information on each company's

safety effectiveness and its commitment to the DFW. The monthly exchange provided information on the most frequently used methods used to communicate safety and DFW programs. The monthly exchange also disclosed what actions the companies were taking towards implementing a DFW. The closeout survey provided factors that are stimulating the growth of a DFW in the construction industry as well as factors that are having no effect. The closeout survey also identified the areas in which contractors are not complying with governmental requirements. Finally, the validity survey found that further testing would be needed to determine if conclusive interrelationships exist between variables.

Chapter 5 presents the factors vital to the implementation of a DFW. These components are described in magnitude of their importance, with the first being Notice, Education, and Testing (NET).

Chapter 6 gives a review of the findings and the analysis that was made in this regard. This chapter also gives a graphic review of the first ten hypotheses.

Chapter 7 is the conclusion and overview of this research. This chapter also gives recommendations for future research that would further the development of DFW programs in the construction industry.

Thirteen appendices are also included. They provide the supporting information that is used either directly or indirectly throughout this study.

CHAPTER II REVIEW OF THE LITERATURE

Introduction

The literature review is divided into three sections, with emphasis on the DFW. This review involves accessing data bases, information centers, and professionals currently doing or having recently completed work in the DFW area of study. Division I is a review of the DFW in the past years along with its relationship to safety. Division II is a review of current professional works and interviews with professional associations, government agencies, and professionals in the field of construction safety. Division III is a review of how the new State of Florida Workers' Compensation Law has and is effecting the construction industry with respect to the DFW.

Division I - Review of DFW Past and Present

Drugs in the workplace began to be recognized as an impairment to productivity in the 1940s. Today, drug activity has grown to the point where 29 percent of employed Americans from the age of 20 to 40 have used an illicit drug within the last year (National Institute on Drug Abuse, 1990b) and 24 percent have personally seen or heard of illicit drug use by co-workers on the job (The Gallup Organization, 1990). A drug is defined as alcohol, including distilled spirits, wine,

malt beverages, and intoxicating liquors; amphetamines; cannabinoids; cocaine; phencyclidine (PCP); hallucinogens; methaqualone; opiates; barbiturates; benzodiazepines; synthetic narcotics; designer drugs; or a metabolite of any of these substances (Florida Department of Labor and Employment Security, Division of Workers' Compensation, Rule 38F-9). In 1985, there was a National Household Survey (NHS) that explored the current pattern of drug use of two age groups. This study was done by the Institute for Survey Research at Temple University, with an analysis made at University of Kentucky (Gust & Walsh, 1990). From the data listed in Tables 1 and 2, it is seen that alcohol is the leader for drug use in both age groups. It is also important to note the larger percentage of abusers are in the over-35 age group. Comparing Table 1 and Table 2 with respect to overall drug use, it shows that drug use, as a percentage of those surveyed, is down in the 18- to 34-year-old group. The NHS data also shows a shift in emphasis in the greater use of marijuana and other drugs in the 18- to 34-year-old group.

From the NHS study, it was also shown that alcohol use was more prevalent with those who worked full-time. This statistic was typical regardless of age group.

In the conclusion to this study conducted by the Institute for Survey Research at Temple University, it was determined that "Illicit drug use is strongly related to age. Specifically, illicit drug use is extensive in the baby boom

Table 1 Current Pattern of Drug Use and Current
Employment for Adults 18-34 Years of Age
(Percentages)

Drug Pattern	Full-time	Part-time	Unemployed
No Drug Use	23.7	30.9	28.9
Alcohol Only	52.9	49.6	37.5
Marijuana Only	0.9	1.0	2.0
Alcohol & Marijuana	11.1	7.8	16.0
Other ¹	3.6	2.6	3.6
Alcohol, Marijuana, and Other	7.8	8.0	12.0

Table 2 Current Pattern of Drug Use and Current
Employment for Adults 35 Years of Age
and Older (Percentages)

Drug Pattern	Full-time	Part-time	Unemployed
No Drug Use	29.1	38.2	43.1
Alcohol Only	65.0	59.0	51.0
Marijuana Only	0.7	1.2	1.7
Alcohol & Marijuana	1.8	1.3	2.4
Other ¹	2.2	*	1.2
Alcohol, Marijuana, and Other	1.1	*	0.7

* Less than one-half of one percent

¹ "Other" refers to any use of any illicit drug other than marijuana, or use of an illicit drug and use of either alcohol or marijuana.

Source: National Institute on Drug Abuse (NIDA) National Household Survey on Drug Abuse, 1985.

generation" (Gust & Walsh, 1989, p. 43). The study went on to conclude that "regardless of the drug, rates for males are generally higher than for females" (Gust & Walsh, 1989, p. \

43). According to NIDA, the trend for illicit drug use among people 35 years of age and older continues to decrease, from 23 million users in 1985, to 14.5 million in 1988, to 13 million in 1990 (National Institute on Drug Abuse, 1989). Yet, the report also points out that "among 18-to-34-year-old full-time employed Americans, 24.4 percent used an illicit drug in the past year, and 10.5 percent used an illicit drug in the past month. Of these full-time workers, 9.2 percent used marijuana and 2.1 percent used cocaine in the past month" (National Institute on Drug Abuse, 1989).

These data are truly important if they can be translated into the construction population, as construction workers have a high exposure to accidents in the construction industry. Unfortunately, the United States Department of Labor, which documents safety data, is not subdividing this information into construction industry subsets.)

Even though the Department of Labor's statistics are general, some areas of the Federal Government have been active in research regarding drug abuse. In 1988, then-Senator Dan Quayle headed a study that found 5-10 percent of those employed suffer from alcohol abuse, and 3-7 percent use some form of illicit drug. (The study went on to conclude that 40 percent of all industrial fatalities and 47 percent of all industrial injuries can be traced to substance abuse (Quayle, 1988). This substance abuse has lead many industrial employers to develop Employee Assistance Programs (EAPs).

An Employee Assistance Program (EAP) is an established program for employee assessment, counseling, and possible referral to an alcohol and drug rehabilitation program (Florida Workers' Compensation Law, p. 16). These EAPs are intended to assist companies to identify and provide treatment programs for drug abusers. These EAPs need to be accessible to all employees to conform with the State of Florida's DFW requirements.

Presently, 80 percent of the U.S. firms which have EAPs employ 31 percent of the American work force (U.S. Department of Labor, 1989). One of the leaders in EAPs is the McDonnell Douglas Corporation.

In 1985, the McDonnell Douglas Corporation initiated a broad restructuring of its internal EAP. EAPs were not new at McDonnell Douglas; they had been offered at various sites since 1970. There was skepticism regarding the effectiveness of the EAP in reducing absenteeism and improving productivity. The overall contribution of the program was limited due to low utilization. Prior to 1985, annualized utilization had averaged 2/3 of 1 percent, as opposed to the industry norm of 5 percent (McDonnell Douglas Corporation Employee Assistance Program, 1989, p. 1).

The need for communicating the concept of a DFW became so evident that beyond the EAPs emerged the Institute for a Drug-Free Workplace, an affiliate of the U.S. Chamber of Commerce. This organization has become a "clearinghouse for information on drug programs for employers" and is instrumental in "helping to frame issues in national debate," according to Executive Director Mark A. de Bernardo (de Bernardo, 1990,

p. 12). They believe communication is the basic ingredient in developing a successful DFW.

Communications in the field of construction safety took an important step forward in 1970 when the Occupational Safety and Health Act was put into place. With this act, Public Law 91-596, the National Institute of Occupational Safety and Health (NIOSH) was established. The intent of NIOSH was to aid in accomplishing OSHA'S goals (NIOSH, Division of Standards Development and Technology Transfer, 1988). NIOSH is still active today as the Federally funded center responsible for awarding individual research, demonstrations, and program grants. After research has been conducted through one of the grants, NIOSH then disseminates information with the goal of educating both employees and employers. NIOSH's research publications are intended to make the industry more aware of safety problem areas and to make suggestions on how to resolve them (NIOSH, 1990).

Although NIOSH has not done much with respect to the DFW, other Federal agencies have been active in this regard. The U.S. Department of Labor has developed An Employer's Guide to Dealing With Substance Abuse. In the Guide, there are some key areas of emphasis that need to be addressed in the communication of the DFW. These key ingredients for a successful DFW are programs that:

- (1) Tell employees how to get help with their drug and alcohol problems, including a description of services available to help employees by a representative of the employee assistance

program if the company has one, or by a community resource.

- 2) Inform employees on how drugs and alcohol actually affect the company's productivity, product quality, absenteeism, health care costs, or accident rates.
- 3) Explain workplace substance abuse policy to employees and tells them about the consequences of using drugs and alcohol, on or off the job. Explains testing procedures, if drug testing is part of the program, with special attention to the consequences of testing positive, and procedures for ensuring accuracy and confidentiality (U.S. Department of Labor, 1990d).

The initials of these key areas of emphasis spell the word TIE (tell, inform, explain), illustrating what is being done by employers who have successful DFW programs. They are recommending accomplishing a DFW within a company utilizing the TIE concept.

The Associated General Contractors of America (AGC) and the Associated Builders and Constructors (ABC) have taken leading roles in communicating safety, through written material, safety courses, and videos. Both organizations are committed to zero tolerance for drug abuse in the construction industry and are active in accomplishing this end.

Prior to 1970, which signified the creation of OSHA, safety guidelines were communicated primarily within individual companies. The Associated General Contractors played a key role in safety when, in 1927, they printed what was then considered the standard in safety guidelines, The Manual of Accident Prevention. Many of the AGC's Safety

Guidelines were incorporated into the 1970 Occupational Safety and Health Act, which was designed to "focus on physical hazard elimination" (Levitt & Samelson, 1987, p. XVII). Both the ABC and the AGC have been instrumental in safety communication. In recent years they have put a heavy emphasis on communicating the requirements of putting a drug-free workplace into practice in conjunction to their safety programs.

The ABC has also developed a program that helps contractors evaluate their safety program. This evaluation is under a safety and education process program called STEP. This program rates contractors as to their effectiveness in various areas of safety. With respect to their DFW, to receive a top rating, companies must have:

- 1) A company policy which contains strict rules, regarding drug and alcohol use;
- 2) A drug testing program for pre-hire, post accident and for cause;
- 3) A record of counseling and drug testing results;
- 4) An employee assistance program (Associated Builders and Constructors, 1990, p. 8).

Also developing on the National level, is OSHA's involvement with the DFW. OSHA is growing steadily each year and with the emphasis the Federal Government has put on the DFW, it is only a matter of time before OSHA will be involved with the enforcement of the DFW (Rogers & Scloff, 1990).

Although OSHA has been a strong supporter of research, education, and enforcement, in respect to communicating safety, the current OSHA budget does not include DFW education and enforcement. Table 3 shows the budgets for the past five years.

Table 3 Federal OSHA Budgets

<u>YEAR</u>	<u>FEDERAL OSHA BUDGET</u>
1987	\$225,811,000
1988	\$235,474,000
1989	\$247,746,000
1990	\$270,748,000
1991	\$285,190,000

Information from Budget Office of
the U.S. Department of Labor

OSHA's budget may appear to be large, yet, considering the economic cost of drug abuse, OSHA's budget for all safety is minimal. These economic costs for drug abuse include factors such as medical care, absenteeism and turnover cost, loss of productivity, and rehabilitation programs. Other, nontangible costs would involve the tragic effect on families and the costs associated with the loss of the financial supporter of the household. In 1985, the estimated total economic cost of drug abuse amounted to \$44.1 billion, and this figure had been projected to increase to \$58.3 billion by 1988 (Rice, Kelman, Miller & Dunmeyer, 1990). This research would indicate that the estimated economic cost of drug abuse in the construction industry is at a floor level, not a ceiling level, with the magnitude of the impact of drug abuse

not truly known.

The problem in determining the impact of drug abuse is due to the shortage of available data. Some indirect indicators of the magnitude of drug abuse can be obtained from several epidemiological databases. However, the data collected in these databases does not paint a complete picture (National Institute on Drug Abuse, 1990b). Medical emergency room statistics are primary areas for obtaining data, but from that point of information, there is a sharp drop in the availability of reliable data. Drug testing results from the DFW programs may eventually assist in this quest for data. Dr. Janet C. Norwood, Commissioner for the Bureau of Labor Statistics, in discussing current and future accessibility of safety and health data states, "The economy today is changing, and I believe the changes are going to make it harder, not easier, to get good data" (Bureau of Labor Statistics, 1984, p. 1). However, it will take an unknown period of time before drug testing is fully accepted in the workplace.

On the Federal level, relating to construction accidents, much data are obtained using the OSHA Form 200, Log and Summary of Occupational Injuries and Illnesses. The OSHA Form 200 is the Federal form that contractors with eleven or more employees are required to complete on an annual basis to record job injuries and deaths. Using these OSHA Form 200 reports as a basis, in conjunction with the costs associated with construction accidents, it has been determined that in

1987, each disabling injury in the construction industry cost an estimated \$23,500/per loss. The injuries in 1987 represented a 22 percent increase over the previous year. From the data contained in the OSHA Form 200, it has been reported that ten times as much delay is caused by accidents as by strikes or other labor problems (Landberg, 1989). When considering just the known costs related to accidents, the costs are high. Thus, looking at what it takes to reduce the accidents, the cost of a safety program which includes a DFW program is becoming a primary consideration. Studies have shown that an effective safety program will cost less than 2.5 percent of a contractor's payroll which will be regained with a multiplying effect in accident reductions (Business Roundtable, 1982).

Many private companies like Tropicana and McDonnell Douglas are developing their own in-house data. Tropicana Products reports a 52 percent decline in applications when screening for the presence of illegal drugs became a condition for employment (Checkett-Hanks, 1991).

Although some private industry, such as Tropicana and McDonnell Douglas, is taking the lead in implementing DFW programs, safety programs that include DFW programs are being encouraged by governmental mandate and incentive programs on the Federal and State level. On the Federal level, The Office of National Drug Control Policy has been instrumental in developing models for state legislation. They have identified

the need and taken action to help cure the problem. In November of 1990, this Federal office published "Building a Drug-Free Workforce." The Office of National Drug Control states:

Because 70 percent of all drug users are employed, the workplace may be the most strategic point in society from which to combat the scourge of drugs. Workers who use drugs must be shown both the carrot and the stick. The stick is the threat of sanctions, including loss of employment, if they continue to use drugs. The carrot is an incentive to seek treatment and rehabilitation for their drug problem (Office of National Drug Control Policy, 1990, p. 1)

The Office of National Drug Control Policy has developed four bills that can work as a package to help develop a "coordinated offensive on drugs in the workplace" (Office of National Drug Control Policy, 1990, p. 1).

On the state level, the State of Florida took a leading step by passing legislation promoting a DFW, on July 1, 1990. On this date, the legislature passed Amendment s.440.02, F.S. to Chapter 90-201 of the Workers' Compensation Reform-Comprehensive Economic Development Act of 1990. This amendment contained significant changes in the state's Workers' Compensation Law, which included a considerable amount of emphasis on employers' developing a DFW.

This section of the Florida Workers' Compensation Law pertaining to the DFW gives criteria that are necessary to fulfill the requirements for an employer to qualify for Workers' Compensation Rate Discounts. The primary sections of these requirements are: Notice, Education, and Testing

(NET). The following are the requirements for NET:

- 1) Notice (a) An employer not having a drug testing program shall ensure that at least 60 days elapse between a general one-time notice to all employees that a drug testing program is being implemented and the beginning of actual drug testing. An employer having a drug testing program in place prior to the effective date of this section is not required to provide a 60-day notice period. (b) An employer shall include notice of drug testing on vacancy announcements for those positions for which drug testing is required. A notice of the employer's drug testing policy must also be posted in an appropriate and conspicuous location on the employer's premises, and copies of the policy must be made available for inspection by the general public during regular business hours in the employer's personnel office or other suitable location.
- 2) Education (a) Maintain a current resource file of provider of employee assistance including alcohol and drug abuse programs, mental health providers and various other persons, entities or organizations designed to assist employees with personal or behavioral problems. (b) inform employees and new hires about various employee assistance programs that the employer may have available. (c) provide an annual education course to be conducted to assist employees and/or supervisors in identifying personal and emotional problems which may result in the misuse of alcohol or drugs. This course must also include a presentation on the debilitating effects due to the misuse of alcohol or drugs and the legal ramifications of the unlawful use of drugs.
- 3) Testing (a) Job applicant testing: an employer must require job applicants to submit to a drug test and may use a refusal to submit to a drug test or a positive confirmed drug test as a basis for refusal to hire the job applicant. (b) Reasonable suspicion: an employer must require an employee to submit to reasonable suspicion drug test. (c) Routine fitness for duty: an employer must require an employee to submit to a drug test

if the test is conducted as part of a routinely scheduled employee fitness-for-duty medical examination that is part of the employer's established policy or that is scheduled routinely for all members of an employment classification or group. (d) Follow-up testing: if the employee in the course of employment enters an EAP for drug-related problems, or an alcohol and drug rehabilitation program, the employer must require the employee to submit to a drug test as a follow up to such program, and on a quarterly, semiannual, or annual basis for up to 2 years thereafter (Florida House of Representatives Committee on Commerce, 1990).

Division II - Review of Current Research

After an extensive review of the current research relative to the DFW, multiple work products were obtained and reviewed for content relative to this research. These works included recent surveys from various organizations, exchanges from companies within the construction industry, and guidelines set at the Federal level.

In a survey published by the Bureau of Labor Statistics, it was found that:

the most important factor with regard to the incidence of these programs was establishment size--the number of employees in an establishment. The larger the establishment, the more likely it was to have drug testing or an Employee Assistance Program. (U.S. Department of Labor, 1989, p. 2)

In a survey conducted by the Bureau of National Affairs, it was found that the size of a company had a great effect on its communication of the DFW program. It found that 43 percent of the Nation's largest companies (those having over 1000 employees) had drug testing programs. In the smaller companies (less than 50 employees), only 2 percent had drug

testing programs (U.S. Department of Labor, 1989). These trends also were consistent with Employee Assistance Programs, with 76 percent of the larger companies and only 9 percent of the smaller companies having EAPs (U.S. Department of Labor, 1990b). One of the most current research studies relative to drugs in the workplace was recently completed by Dr. Saleh Altayeb in pursuit of his Ph.D. dissertation from Clemson University. In this study it was concluded that "for the whole sample, drug testing was not proven to have made a significant difference in incident rates after its implementation, although incident rates dropped by an average of nineteen percent" (Altayeb, 1990, p. 16). The other significant finding was that "the size of the company did not seem to have a significant difference in the magnitude of the reduction in incident rates" (Altayeb, 1990, p. 17).

In a recent Gallup Poll that was conducted on attitudes toward drug testing of various types of workers, 81 percent of construction workers stated their support for drug testing (The Gallup Organization, 1990). Mark A. de Bernardo, Executive Director of the Chamber of Commerce-affiliated Institute for a Drug-Free Workplace, as well as Director of the Chamber's Labor Law Action Center, has stated, "While many union leaders have vociferously opposed drug testing, the survey strongly suggests that union leaders aren't speaking for a majority of union members" (de Bernardo, 1990, p. 9). He goes on to point out that "drug abuse is not a labor

management issue but a common problem faced by employers and employees alike" (de Bernardo, 1990, p. 9).

In a survey conducted by this researcher, organizations and/or associations were contacted to determine their activities in communicating a DFW program. Those listed in Table 4 were personally contacted and asked what their organizations were doing to assist in communicating a DFW. They were also requested to send written materials regarding this subject. Part of these materials were incorporated into this overall research. These data are discussed in greater detail in Appendix K, page 170.

Table 4 Professional Activities in Communicating a DFW program

<u>Association/Agency</u>	<u>Workshops</u>	<u>Publications</u>	<u>Video</u>	<u>Continued Research</u>
A.S.S.E	Yes	Yes	No	No
ABC	Yes	Yes	No	Yes
AGC	Yes	Yes	No	No
CLRC	No	Yes	No	Yes
EAPA	No	Yes	No	Yes
F.D.O.T	No	Yes	No	Yes
F.D.O.L.	No	No	No	Yes
General Motors	No	Yes	No	Yes
Inst. for a DFW	No	Yes	No	Yes
Miami Chamber	No	Yes	No	Yes
McDonnell Douglas	No	Yes	No	Yes
NIDA	Yes	Yes	Yes	Yes
Office of the NDCP	No	No	No	No
OSHA	No	No	No	Yes
Racal Milgo	No	Yes	No	Yes
Southern Bell	No	Yes	No	Yes
Sun Bank	No	Yes	No	Yes
Tropicana Products	No	Yes	No	Yes

Note: Associations/Agencies are further identified in Appendix K, page 170.

It has been found that geographic location has little effect on drug testing or Employee Assistance Programs (U.S. Department of Labor, 1989). This information is of particular importance to the original concept of this research, which was going to evaluate geographic effects statewide.

One of the major concerns facing the construction industry is the fear that Congress will enact the OSHA Criminal Penalty Reform Act. This proposed act would cause contractors to be criminally liable for serious accidents if willful intent were proven. Not removing drug users from the work site may fall into this willful intent category (Rogers & Soloff, 1990).

Safety is often conceived as an effort that is costly with the sole benefit of protecting individuals from injury or death, but accident prevention has a direct impact on productivity as well. Unsafe actions may not always cause an injury but may still negatively effect production. A "tunnel vision" approach to productivity with a disregard for the DFW is a position which is not appropriate in the future of construction management. Safety and productivity can work in support of each other. Good construction management's safety planning and eliminating of crisis situations are bases for enhancing productivity (Levitt & Samuelson, 1987).

Safety programs, inclusive of the DFW program that are cohesive with production, must be communicated to the workers (Levitt & Samuelson, 1987). Premature evaluation of the

successes of safety, inclusive of DFW, communication may lead to the "honeymoon effect" that Michael Rooney refers to in his dissertation dealing with productivity and job satisfaction (Rooney, 1987).

The DFW is now definitely a part of the future of the construction industry. To contribute to the evolution of the DFW, the U.S. Department of Labor has put forth some basic steps that contribute to the evolution of the drug-free workplace:

- 1) Take a firm position against workplace substance abuse and communicate that position. Management, employee representatives and employees can all take such a position, jointly or individually.
- 2) Learn about drugs and alcohol and how they affect individuals and workplaces. Make sure that this information is communicated to everyone in the workplace. Sponsor and participate in activities geared to education and awareness.
- 3) Do not ignore the signs and symptoms of substance abuse. Depending on the workplace situation, the identification of workplace substance abuse may be critical to the health and safety of coworkers and the general public.
- 4) Provide for assistance so that employees who have a drug or alcohol problem can get the help they need. Assistance may take the form of a formalized employee assistance program or it may constitute referral to available community resources. (U.S. Department of Labor, 1990d, p. 19)

Division III - Review of the State of Florida's Data

The administration of an effective DFW state wide program will be dependant on the State's administration of such a program. The overall control of the State of Florida's DFW

program is under the 1990 modification of the Workers' Compensation law. As the Workers' Compensation law is communicated and enforced so will the State's DFW program be effected.

Since the DFW program is under the umbrella of the Division of Workers' Compensation, it is appropriate to look at the proposed goals of such a system in a generic sense. "A fundamental objective of a workers' compensation program is an effective delivery system for the program's benefits and services. If the delivery system is impaired, other basic objectives, such as adequate income maintenance and complete coverage, cannot be achieved" (Berkowitz & Burton, 1990, p. 1).

The State of Florida has determined a need for such analysis from its history of increased WC cost to the point of much public unrest. To understand why the 1990 changes were made, one should first look at the past history of the Workers' Compensation laws.

The State of Florida has made progressive growth in the area of Workers' Compensation administration starting with some major changes in the law. With the 1979 amendments these changes included the then bureau being elevated to a division within the Department of Labor and Employment Security (Berkowitz & Burton, 1990, p. 7).

In 1989, the State of Florida made more amendments designed to strengthen the Division of Workers' Compensation

by educating the users of the Workers' Compensation program about the provisions of the law and the obligations of the parties. Whether these training and education programs are effective is still in question. The State of Florida WC consultant states, "it should be possible to run some tests of whether the training and education programs are having any effect. It would be possible to conduct some surveys among the persons in the targeted group to test their understanding of the Workers' Compensation Program" (Berkowitz & Burton, 1990, p. 17).

Many legislators were under pressure to make changes in the law, which was done in 1990. The law is still under scrutiny by industry and the news media with judicial challenges pending. Contractor organizations have been active in giving input to these proposed changes. Recommendations to the State include: "If the costs of Workers' Compensation are to be reduced in Florida, it will be necessary to pay attention to the administration of the law as well as to the types and amounts of benefits and to the eligibility rules for those benefits" (Berkowitz & Burton, 1990, p. 1).

There are also legal issues surrounding the issue of a DFW. According to Mr. Gordon Dean Rogers, Esquire, and Mr. Robert S. Soloff, Esquire, legal experts in the field of the DFW, companies failing to have a DFW are exposing themselves to explicit legal liabilities. Yet, companies with a DFW have definite legal benefits. They state:

The new Florida Workers' Compensation Law does not require any employer to adopt a drug or alcohol testing program. However, employers which elect not to adopt drug-free workplace programs should be aware that the combined impact of Federal requirements and State incentives may soon render employee drug testing as a standard practice in many industries. This means essentially that employers which forego drug testing bear the risk of being held responsible under negligence theories (e.g., negligent hiring, negligent retention) in the event that an employee causes injuries or property damage while under the influence of drugs or alcohol (Rogers & Soloff, 1990, p. 27).

On the liability and benefit issues, they state:

Establishing a drug and alcohol free workplace policy will generally result in tangible benefits to employers. Problem job applicants either decline to apply when informed of drug testing requirements or are quickly screened out before expensive training and supervisory time are wasted. Employee morale and productivity are generally improved. Disciplinary actions against employees who violate the policy should be easily justified and efficient. The employer's potential legal liabilities due to injuries and accidents should be reduced. Insurance costs should also be reduced based upon the incentives contained in the new Florida Workers' Compensation Law and upon an overall reduction in lost time accidents. Refusal to submit to a drug test by an employee holding a safety sensitive position has held to constitute "misconduct" sufficient to disqualify the employee from eligibility for unemployment compensation benefits. (Fowler v. Unemployment Appeals Commission. 537 So.2d 162 (Fla. 5th DCA 1989); rev. denied 545 So. 2d 1367 (Fla. 1989). Finally, an employer implementing such a policy has done its part to assist in fighting the national drug epidemic (Rogers & Soloff, 1990, p. 27).

In the State of Florida, the Workers' Compensation Research and Evaluation Center has done significant research relating to the statistics surrounding Workers' Compensation (Construction Labor Research Council, 1991). This agency was a statistical communication source that was available in 1990

and 1991. Their research was pertinent to what safety professionals are presently needing to modify and develop their DFW programs. Table 5 is a work product of the Center.

In Table 5, Special Trade Contracting is the leader with the highest number of compensable cases in the State of Florida in 1988. With more than twice the number of accidents than in any other classification, safety needs to become a focal point of change in the construction industry.

The State of Florida has taken the lead on the state level in providing legislation regarding DFW. The past governor, Robert Martinez, was instrumental in getting the

Table 5 Industry Groups with the Highest Number of Compensable Cases, Florida, 1988

<u>Industry</u>	<u>Number of Cases</u>
Special Trade Contracting	11,256
Restaurants	5,049
Country Government	4,669
Retail Food Stores	4,531
Medical Services	4,355
Wholesale Trade	4,213
Food and Kindred Prod.(Mfg.)	3,023
Motor Freight Transp.	2,963
Misc. Business Services	2,696
Real Estate	2,578

Source: Construction Labor Research Council, 1991.

State's present DFW program development incorporated into the 1990 WC legislation. Thus, the State of Florida legislature has become increasingly interested in assimilating data that give specific information related to why the Workers' Compensation rates have gone up significantly in recent years. Table 6 and comparative Table 7, based on data

Table 6 Florida Accident Cases vs. Cost and Employment (1988)

<u>Industry</u>	<u>Number of Cases</u>	<u>Cost</u>	<u>Employment</u>
Total	86,742	\$343,702,680	4,987,982
Wholesale & Retail Trade	21,970	66,881,249	1,374,881
Construction	15,741	61,052,273	352,508
Services	14,048	71,217,892	1,638,460
Manufacturing	10,865	38,673,520	525,390
Government, Comm. & Public Utilities	6,081	31,354,140	301,988
Agri., Frstry, Fishing	3,303	23,271,355	142,689
Finance, Insurance & Real Estate	3,347	27,271,355	362,886
Mining	128	471,963	9,033

Table 7 Accident Cost Per Case and Cost Per Employee (1988)

<u>Industry</u>	<u>Cost Per Case</u>	<u>Cost Per</u>
<u>Employee</u>		
Total	\$3962.36	\$ 68.90
Wholesale & Retail Trade	3044.21	48.65
Construction	3878.55	173.19
Services	5069.61	43.47
Manufacturing	3559.46	73.89
Government Level., Comm. and Public Utilities	5156.08	108.83
Agri., Forestry, Fishing	7045.52	163.09
Finance, Ins. & Real Est.	8148.00	75.15
Mining	3687.21	52.25

supplied by the Florida Department of Labor and Employment Security, show the most current information as to which industries are having the most compensable cases, the cost of these cases, and the number of employees involved with these cases. The cost per employee is the highest in the construction industry (Florida Department of Labor and Employment Security, Division of Labor, Employment, and

Training, 1988), which puts a spotlight on the question why is this occurring and what can be done to reduce these costs?

Summary

The literature review indicates a much increased emphasis in recent years on communicating safety, with specific emphasis on the DFW, and has shown that there are many variables in determining what is effective in developing a DFW program. Only the larger companies are able to customize their DFW programs to fit their company's safety culture. A safety culture, being that atmosphere and company identity that is created by managers who inspire others to share their goals "by promoting the right people" and "communicating the message that safety is of critical importance in direct contact with employees at all levels" (Levitt and Samuelson, 1987, p.70).

Presently, the OSHA Form 200, which is a Federal requirement for recording annual occupational injuries and illnesses, is the primary source of data for the construction industry. However, this form is often used to make general statements regarding safety and accident prevention, but the non-specific nature of this information lacks foundation.

Because of the lack of data, the identification of drugs and other associated problems on the work site have not been considered a problem that could effectively be dealt with until recently. Dealing with drugs on the work site also has civil rights consequences. Civil rights laws and the

employees' rights of protection against invasion of privacy were and in some instances still are conflicting with the need for drug testing.

The new Workers' Compensation Law in Florida is attempting to give the employer not only the right to test for drugs but also the incentive to do so. Not only are an employee's rights not violated, but employers are required to do testing if they want to get the Workers' Compensation Rate Discount (Florida Department of Labor and Employment Security, Division of Workers' Compensation, Rule 38F-9).

From this literature review it was found that the same people who are in charge of the safety programs in the construction industry are also in charge of the DFW programs. This correlation also was consistent in the agencies and companies that are compiled in Table 4, supported by Appendix K, page 170.

CHAPTER III METHODOLOGY

Introduction

The purpose of this research was to construct a model that would explain the relationships between communication, safety, and DFW variables. The methodological steps of this research were shaped by the need to meet the two goals, that of testing the hypotheses listed in Chapter I and identifying the factors involved in creating a drug-free workplace. These steps are as follows:

- 1) A model to test the hypotheses was developed.
- 2) The data needed for the analysis were identified.
- 3) Sources of data were identified.
- 4) Survey questionnaires were designed to collect the needed data.
- 5) The data sources were surveyed.
- 6) An initial regression analysis was performed on the data to test the hypotheses.
- 7) A second sample was collected.
- 8) The same model was tested on this second sample as a check of its validity.
- 9) Descriptive statistics and chi-square statistics were generated to assess the significance of the factors.

Figure 1 depicts the overall flow of the methodology that was utilized in this research. The upper boxed-in portion of Figure 1, identified as A, depicts the items that were factors in the development of the model. The first five factors shown in Figure 1 were positive components in the development of the DFW, whereas, the sixth item was a group of factors that were constraints on the DFW development. Once the above stated positive and negative factors relating to the development of a DFW were identified, the evaluation of each contractor's DFW could be completed.

To test the model shown in Figure 1, the ABC was chosen as a representative population for testing, identified as B. Questionnaires were then developed to obtain safety and DFW data, as identified as C_1 and C_2 .

After the data collection, identified as D, was accumulated, through regression analysis, the model was defined, as identified as E. In conjunction with defining the model, correlations were examined to see if any synergy could be identified between factors.

After the model was redefined, the validity survey was done to test the model, as identified as F. The last part of the study involved analyzing the results, which is identified as G. This analysis will be further discussed in the conclusion of this text, in conjunction with recommendations as to further testing and evaluation.

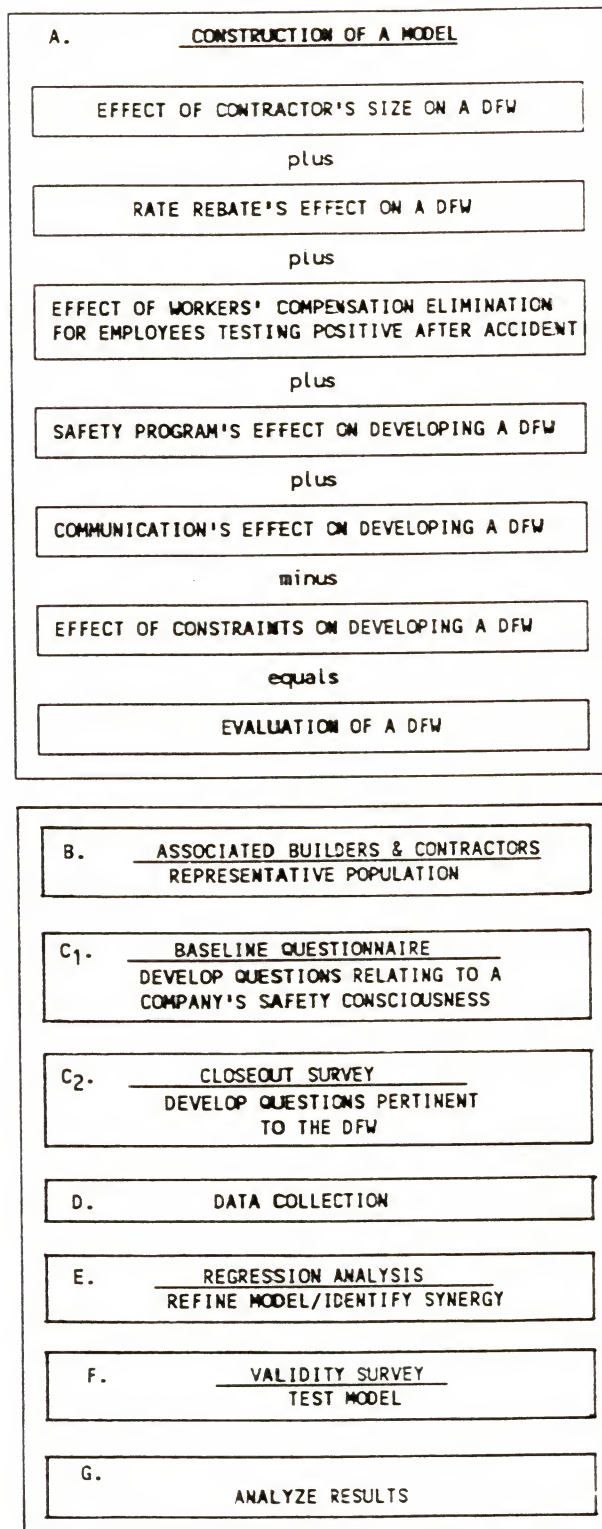


Figure 1 Flow Chart of Model Methodology

Sample Selection

In Florida, there are approximately 12,450 active licensed general contractors (Personal communication, Florida Department of Professional Regulations, 1991). This population of general contractors is divided into three major groups: residential, commercial, and heavy construction. This research focuses primarily on the commercial and heavy construction portion of the population.

In determining the most appropriate way to evaluate what variables affect the DFW, a representative population was analyzed. The population to be evaluated was originally to have been contractors who had been in business in Florida for at least five years. When a pilot study was attempted, problems of locating the contractors were encountered. It was believed contractors having been in business for 5 years would have shown economic stability and, accordingly, would be more inclined to have investigated or implemented a DFW.

To identify contractors with five or more years' experience, a five-year-old listing of all State of Florida contractors was obtained. By the use of computer generated random numbers, a selection was made and calls were initiated to contractors. If there was no answer or if the number had been disconnected, the next contractor in the list was contacted. This procedure allowed replacement without bias.

Although the sampling scheme was statistically sound, it was impractical. The first company selected did not respond,

and the next 35 companies selected as replacements either did not answer their telephones or the phone was not in service. After continued poor response from the pilot test group, it became clear that attempting to draw the sample from a five-year-old list was not going to yield a representative sampling.

With the problems associated with using a sample of contractors that had been in business for five years, an alternative strategy was adopted. There are two major industry associations to which many commercial and heavy construction general contractors belong: Associated General Contractors and Associated Builders and Contractors. The AGC historically has been regarded as representative of those contractors with labor union and/or open-shop affiliations. In recent years, many open shop contractors have become members of the AGC. The ABC membership has represented primarily non-union, open-shop companies, also called merit shop contractors. The membership of the ABC was chosen as the study population since its members would be less likely to be influenced by safety and DFW programs initiated by labor unions. Other union constraints on the actions of the general contractors' activities also would be avoided. In a report that was done for the Construction Industry Institute, on substance abuse, the problem and its solution, the attitude of some labor unions was noted. Only 3 of the 16 unions asked to participate in the survey actually

participated. The results were that "two of the three unions' representatives indicated that substance abuse is not a problem in the construction industry" (Construction Industry Institute, 1987, p. 627).

This attitude was further expounded upon when one of the respondents stated:

The building and construction trades department has hit the nail right on the head when it correctly points out that more accidents, injuries, and fatalities occur on job sites as a result of OSHA violations and lack of education and training than will ever be caused by substance abuse and training (Construction Industry Institute, 1987, pp. 627-628).

All of these union respondents stated that they conducted alcohol and drug education programs and provided access to an Employee Assistance Program. The above union opinion is in direct conflict with the findings published by the Employment and Productivity Subcommittee of the Senate Committee on Labor and Human Resources which estimated that 40 percent of all industrial injuries can be traced to drug and alcohol abuse (Quayle, 1988). With this type of activity in the workplace along with the possibility of preconceived attitudes, it further supports the use of the ABC as the study population group.

The ABC includes companies that are in a variety of types of construction, that are working across the state, and that represent both large and small organizations. Anticipating the lack of response encountered with the over five-year-old contractor list, the decision was made to contact every

organization. Telephone contact with all contractors on the 1990 membership list was accomplished. A total of 208 companies were contacted or disqualified, as shown in Appendix I. Although this approach sacrificed the random nature of the sample frame and, thereby, limited the ability to generalize the conclusions drawn from the results of the study, this alternative approach permitted the research to proceed in a way that would allow for an established respondent base.

This sampling procedure restricted the inferential value of the results of this research to the membership of the ABC. However, the conclusions drawn from the study provide strong support for statements about the construction industry in general and provide guidance for future programs and research.

Survey Questionnaires Designed

The initial questionnaire was designed to obtain general information from the contractor selected to be questioned. The questionnaire title, "Initial Interview and Prequalification Form", which can be found in Appendix A, was indicative of the form's intent: to ascertain the willingness, or lack thereof, of the interviewee to participate in this research. This form was also intended to obtain information about the company's characteristics, including company size with respect to dollar volume of construction completed and average number of employees. The comments about participation were intended to obtain the company's knowledge about the development of a DFW. The participants were contacted via

telephone to obtain their responses to this questionnaire.

The baseline questionnaire, shown in Appendix B, was formulated from an extension of what was used by Raymond Levitt and Nancy Samuelson in their research for Construction Safety Management (Levitt and Samuelson, 1987). The intent of the baseline questionnaire, which required written responses, was to gather data relative to the safety characteristics of the company, which could be compared against the DFW characteristics that were to be monitored on the Monthly Exchange Questionnaire. The monthly exchange questionnaire was developed from the literature search, initial interview and prequalification form, and the interviews with individuals involved in DFW activities. The questionnaire was designed to obtain a maximum amount of information while requiring the respondent to exercise a minimum effort to complete. This written-response questionnaire can be found in Appendix C.

The closeout survey, shown in Appendix F, was conducted verbally, and was designed to help fill any gaps created by questions not answered in the previous research or questionnaires. This format also allowed the company representative to voice opinions on the DFW, safety, and the effectiveness of this research.

The validity survey, depicted in Appendix J, also conducted verbally, was designed to provide validation or non-validation of the model that had been developed. The design was to have fewer questions, with questions in a different

order than on the closeout survey.

Surveys Conducted

The research plan consisted of an approach that required a combination of verbal and written communication. The following is a chronological listing of how the plan was to be followed.

1) Obtain a current state-wide listing of all ABC contractors. Update the list with correct addresses and phone numbers, company presidents, and the person in charge of safety.

2) Contractors who knew the researcher and with whom there had been significant personal contact within the past five years were to be identified and removed from the survey.

It was believed that with the amount of personal communication necessary to accomplish this survey, past relations could affect the validity of the results.

3) All State of Florida Contractors with the exception of those in item 2 were to be contacted by telephone with the intent of determining their:

- a) willingness to participate in the survey;
- b) yearly dollar sales volume;
- c) yearly average number of employees;
- d) knowledge regarding what constitutes a drug-free workplace;
- e) knowledge regarding what the State of Florida had enacted with respect to a DFW;

- f) present drug-free workplace program participation;
- g) desire for more information about Florida's new Workers' Compensation Law relative to the DFW.

4) Those contractors who were interested in participating in the survey were to be divided into two groups based on yearly dollar volume of construction completed by their company. The objective was to have the companies distributed equally among dollar-volume categories.

Participants in the control group (Group One) were to be interviewed initially and requested to fill out a baseline questionnaire. There would then be no other contact for four months at which time they would be requested to participate in a closeout survey.

Participants in the experimental group (Group Two) were to be interviewed initially and also requested to fill out a baseline questionnaire. This experimental group was then sent monthly information on the DFW, and they were requested to fill out a monthly survey form. At the end of the four-month study they were requested to participate in a closeout survey.

5) Both groups were also given an opportunity to offer open-ended comments. The comments were considered vital to this phase of the study.

6) After data were obtained from the baseline questionnaire and closeout survey, the model was refined.

7) The model was then tested using a third group comprised of the contractors who were not contacted in the baseline or closeout survey data.

Initial Contractor Contact

The objective of the initial contacts made by telephone was to identify organizations willing to participate in the study. The reporting of the participant's DFW activities was then recorded on the questionnaire form shown in Appendix A.

Those contractors agreeing to participate in a more comprehensive survey were mailed a baseline questionnaire (see Appendix B). The objective of the baseline questionnaire was to collect more detailed information about the methods of present contractor communications with respect to safety and the DFW. The baseline questionnaire also provided insight into the corporate safety culture vis-a-vis safety in general and the DFW in particular.

Monthly Exchange

In deciphering the factors that play important roles in creating a DFW, it was believed to be essential to include the data obtained from the monthly exchange. The monthly exchange was designed to give the participating contractors something of benefit for their company prior to asking them to complete a monthly questionnaire. The secondary intent of this type of communication was to evaluate the monthly exchange as a possible component in developing an effective DFW.

Each month, contractors participating in Group Two were requested to fill out a questionnaire as shown in Appendix C. They were sent material that pertained to safety and the DFW as typified in Appendix F. What this procedure accomplished was to give these contractors a tool that they could use in their companies prior to dedicating the time necessary to fill out the monthly questionnaire.

If this monthly exchange technique is proved successful as a vehicle for getting contractors to communicate, then it may be a tool to be used in future research. This monthly exchange may also have potential use within company intercommunications.

Monthly Data Collection

The questionnaire in Appendix C was sent out each month with safety and DFW information in the same envelope. The Group Two contractors were then to return the completed form within 10 days. If a participating contractor did not return the completed questionnaire within 30 days, a follow-up call was made inquiring as to the form's status and requesting that it be completed and returned as soon as possible. A follow-up call was also made if the questionnaire was returned with incomplete or inconsistent information.

Incomplete questionnaires included those with no identification of the person filling out the questionnaire, or unanswered questions. Inconsistent responses included such responses as "yes" to the questions about whether substance

abuse testing was conducted after injury, but a "no" response as to who conducted the testing.

Closeout Contractor Contact

The primary intent of the closeout survey was to integrate all the information into a cohesive unit and to acquire any missing data that were not obtained from the baseline or monthly questionnaires. As noted, the closeout survey also provided the opportunity for respondents to comment on any issues relating to the DFW, communication, or safety.

The closeout survey was designed with questions for which the responses would support or point out conflict with previous responses. The closeout survey was administered by telephone and required 15 - 45 minutes to complete. A key factor in the questionnaire design was to word questions in such a way that the respondent would have to think carefully before answering.

A telephone interview was conducted because of the much higher degree of success in the initial telephone contact calls versus the response to the written monthly questionnaire. It was clear that contractors would talk about issues that they were unwilling to put in written form. This was the reason a comment section was included in the final form of the closeout survey. An additional purpose of the closeout survey was to determine if any major shifts had occurred in methods of safety and DFW communication during the

four-month term of the study.

Initial Regression Analysis Performed

The regression model examines the relationship between a measure of whether or not a particular firm has a drug-free workplace (the dependent variable) and various factors (independent variables). These factors are: notification of drug testing, education, testing for drugs, firm size (measured by average number of workers in Florida over the last six months); two safety variables (whether or not a safety person is on each job site and whether or not the supervisors are trained for safety meetings); the rate rebate's effect on a DFW; the effect of Workers' Compensation elimination for employees testing positive after an accident; and a communication measure.

In these analyses, the particular statistical technique employed (regression analysis with a dependent variable which takes on only two values: a firm either has or does not have a DFW) is called logit analysis. The econometrics program was used for this logit analysis (Greene, 1987). This technique is preferred whenever using a dependent variable such as is used in this study. An individual independent variable may either increase the likelihood that a firm has a DFW (a positive relationship) or decrease that likelihood (a negative relationship). The coefficient sign of each independent variable in the model tells whether the relationship between that variable and the dependent variable is positive (a

positive coefficient) or negative (a negative coefficient).

At this juncture it became necessary to redefine the definition for the dependent variable. The new definition in the model was to be chosen from one of the notice, education, or testing requirements necessary to have a SOFA DFW. Testing was chosen to be the dependent variable. Notice was not chosen because it had no definitive inter-relationship to a DFW actually being put into effect. Education was not chosen due to the vagueness concerning this element in the state's requirements for compliance.

The independent variables considered were those that were obtained from survey data results. These variables were the major components as determined from the literature research.

Through regression analysis, the data were analyzed. The overall relationship was determined by the chi-square statistic; the goodness-of-fit was determined by the pseudo- R^2 , and heteroskedasticity and collinearity were checked for their effect on the model. Heteroskedasticity is the violation of Classical Assumption V, which states that the error terms are drawn from a distribution that has a constant variance. This condition often occurs in data sets in which there is a wide disparity between the largest and smallest observed values (Studenmund and Cassidy, 1987). Collinearity between two independent variables implies that they are really the same variable, except that a constant has been added to

one of the variables (Studenmund and Cassidy, 1987). The overall flow of the model methodology is depicted in Figure 1.

Validity Survey

The validity survey was done to determine if the model was working. The questionnaire was designed to be answered in less than 10 minutes. To help avoid prejudice and routine in the responses, questions were included that were beyond the scope necessary to test the model, as shown in Table 36.

Validity Regression Analysis Performed

The same model that was estimated on the original sample was also estimated on this second sample as a validity check of the model, as shown in Table 40. The results of this step were compared with the results from the original regression analysis. Similar results would suggest that the model was working as estimated. If the results are not similar it would be appropriate to look at expanding the population to be sampled outside the ABC membership. Since the ABC population had been exhausted, a new larger population would need to be identified to allow an increase in the sample size.

CHAPTER IV FINDINGS

Introduction

As stated earlier, the current 208 general contractor members of the Associated Builders and Contractors (ABC) comprised the population for this survey. Because of the confidentiality of the information provided by the contractors, all results are referenced by an identification number assigned to each company in place of its name.

The survey group to be used in this research was determined through the pre-qualification interview. Nineteen percent (39 companies) of the potential participants in the survey were not contacted because of previous contact with this researcher. Twenty-five percent (52 companies) of the potential participants in the survey were not available because of their telephones being disconnected with no forwarding telephone number. Another twenty-five percent (52 companies) of the potential participants in the survey were not available when called. This later group either had no-one who was qualified to talk about the research, or no-one was at the number called.

Of the remaining 65 companies, a total of 58 organizations agreed to participate in the more detailed survey. After distributing baseline questionnaires to this

group, a total of 29 companies filled out and returned the questionnaire. Three of the questionnaires were so incomplete they were deemed to be of no use and, accordingly, were eliminated from the results.

The investigation consisted of administering a series of different surveys. Each survey was uniquely designed to obtain distinct DFW information. Figure 2 outlines which factors were determined through what surveys.

Baseline Questionnaire Results

The initial company contact with the baseline questionnaire provided an overview of each company's DFW program. The baseline questionnaire then provided each participant with the opportunity to expound on the company's safety and DFW programs. Many companies also made recommendations, some of which are included in the Recommendations portion of this dissertation.

The results from the baseline questionnaire yielded the Experience Modification Rating (EMR) and the OSHA Form 200 data, which are shown in Appendix E of this report. The EMR is a contractor's rating that is calculated on a yearly basis by the non-profit National Council on Compensation Insurance that gives an indication of the frequency and costs associated with employee accidents. The OSHA Form 200 is required for contractors with eleven or more employees. This form shows the accident loss time, the severity of the accident, and medical treatment required because of the accident. These

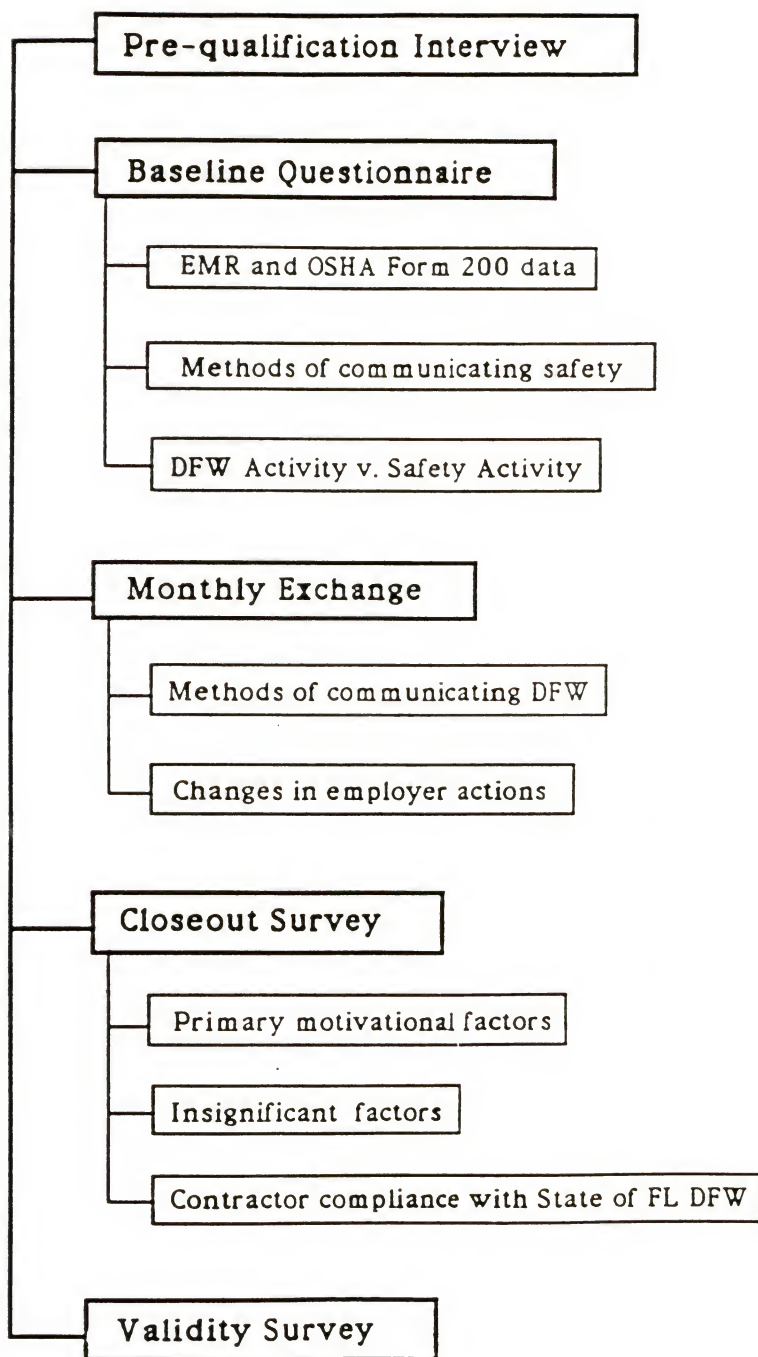


Figure 2

Flow Chart of Survey Findings

data were then used to show, in Table 26 on page 85, the interrelationships between the companies' EMR and OSHA activity versus DFW program activity. The EMR has become a very important criteria for evaluating contractor's safety effectiveness.

Table 8 clearly shows an increase in EMR over a three year period. This increase is typical of that experienced in the Florida construction industry.

Table 8 Increasing EMRs for Contractors

YEARLY	1987	1988	1989	AVERAGE	MANUAL
MEAN EMR	.859	.895	.941	.898	1

Monthly Exchange Results

The objective of the monthly exchange was to create an awareness for DFW and to encourage an expansion of company DFW development. It was anticipated that the positive effects of this frequent communication would be evidenced by the initiation of new or expanded programs. From the survey questionnaire results, it was found that the majority of the respondents stated that the monthly exchange was useful to them as shown later in Table 10, page 66.

The results from the survey were inconsistent partially because of the lack of participation from the respondents and from their apparent concern for criticism by their lack of knowledge and lack of development of their company's DFW.

Many participants that were not sending back the evaluations were telephoned as many as three times before being deemed non-responsive.

Methods of Communication

As shown in Tables 23 and 24 on page 81, the two most commonly used methods of communicating a DFW program were safety meetings and newsletters with 40 percent of the respondents stating they used safety meetings as their primary method of DFW communication. Overall, 40 percent of the companies used word-of-mouth to communicate the DFW; however, medium size companies have eliminated word-of-mouth communication for DFW programs.

Availability of Information

The monthly reporting from the contractors involved in this research showed that contractors were still trying to obtain information about DFW requirements and examples of successful programs. In the first submittal from the respondents, 53 percent stated that they were still seeking information on the DFW.

Changes in Employer Actions

Two important changes were detected from the first month to the second month. First, companies reporting that their supervisors received drug abuse training went from 0 percent to 18 percent. Second, companies reporting that newly hired employees were being tested for drug use increased from 13 percent the first month to 29 percent the second month.

Reportings from the third, forth, and fifth months indicated little to no change in actions taken by contractors in regard to DFW programs. The changes that were apparent between the first and second month were meaningful to the point that the Hawthorne Effect may have been a motivator for these actions. The Hawthorne Effect is a characteristic of employee behavior that was brought to attention by studies done at the Hawthorne Plant of the Western Electric Company. These studies showed how an unintentional granting of status can become a motivating influence in production. This increase in production in any test group has now become known as the Hawthorne Effect (Parker & Oglesby, 1978). This concept is more fully developed in the Conclusions and Recommendations section of this dissertation.

Closeout Survey Results

The closeout survey identified changes that the contractors implemented from the first contact to the last. It was the intent of this survey to identify complacency, resistance, DFW initiation, and possibly the magnitude of changes that may have occurred because of the Hawthorne Effect. These closeout interviews that included 58 companies were also used to test the hypothesis that there was no significant relationship between company size and communication method. A chi-square test was used to test the level of significance.

Statistical Review and Chi-square Analysis

The closeout survey provided material that has been addressed in the latter part of this chapter in the form of descriptive and analytical statistics. The 21 questions analyzed from the closeout questionnaire are as follows:

5. Does company do pre-job orientation that includes drug-free workplace program information?
6. Are new hires tested for drugs?
7. Are the dangers of prescription drugs communicated?
8. Are supervisors trained in drug-free workplace program communication?
9. Is the company developing files on communicating a drug-free workplace program?
10. Did rate rebates for 1992 for compliance with a State of Florida-approved drug-free workplace program cause the company to take any actions?
11. Did this U.F. survey assist in your drug-free workplace program communication?
12. Is top management committed to a drug-free workplace?
13. Does the company do any drug testing?
14. Does company drug testing comply with State of Florida HRS requirements?
15. Do employees have access to any Employee Assistance Programs?
16. Has company done anything regarding notifying employees of drug testing?
17. Would company have complied with mandatory governmental drug-free workplace requirements?
18. Will having a drug-free workplace program make the company more profitable?
19. Were rate incentives a motivation for company to have a drug-free workplace program?

20. Has company done anything in last 6 months regarding a drug-free workplace?
21. Is the cost of the program slowing start-up of a drug-free workplace program?
22. Is the time necessary to implement program slowing the drug-free workplace program?
23. Is a lack of qualified personnel slowing development of a drug-free workplace program?
24. Is a lack of necessary information slowing development of a drug-free workplace program?
25. Is the loss of Workers' Compensation benefits for employees testing positive after an accident a prime motivator to institute a drug-free workplace program?

The statistical review of company size relationships is shown in Table 9. A sample of the calculations that were used to develop Table 9 are depicted in Figure 1 on page 38. The 99 percent, 95 percent, and 90 percent of compliance shown in Table 9 are the different levels of significance that were identified in the statistical analysis.

Primary Motivational Factors

As part of the Closeout interview, questions were asked to determine the importance of various factors in motivating the company to take action. These factors are listed in order of response priority, as shown in Tables 33 and 34 on pages 152 and 153 respectively, with the factor reported as having the highest positive response being discussed first.

Top Management Commitment to a DFW Program

Top management commitment is the single most consistent positive response area that was reported on the closeout questionnaire. Of all the results there was only one response

Table 9 Statistical Review of Company Size Relationships (From the Closeout Survey)

QUESTION	10 - 100		>100		Action		Chi-Square
	Y	N	Y	N	Y	N	
05) JT	4	10	20	8	14	2	11.66***
06) NH	1	13	8	20	10	6	12.41***
07) PD	0	14	6	22	11	5	16.77***
08) ST	1	13	11	17	11	5	13.95***
09) FC	0	14	6	22	10	6	18.30***
10) RD	4	10	8	20	3	13	0.52
11) UF	5	9	13	15	9	7	2.15
12) TM	14	0	27	1	16	0	N/A
13) DT	1	13	11	17	14	2	20.31***
14) DR	0	13	1	27	5	11	7.72**
15) EA	1	14	4	24	8	8	7.48**
16) NE	1	13	12	16	14	2	22.87***
17) MR	14	0	26	2	15	1	N/A
18) DP	12	2	21	5	15	0	3.81
19) DI	11	2	18	8	8	8	4.23
20) DG	1	13	9	19	6	10	4.65*
21) CD	3	11	7	18	3	13	0.54
22) TD	2	12	6	22	5	11	0.75
23) QD	2	12	6	22	0	16	3.45
24) LD	4	10	10	18	1	15	4.71*
25) LB	10	4	12	16	9	7	3.86

* 90 percent Level of Confidence

** 95 percent Level of Confidence

*** 99 percent Level of Confidence

JT = Pre-Job Orientation

NH = New Hire Drug Testing

PD = Prescription Drug Dangers

ST = DFW Supervisor Training

DT = Company Drug Testing

DP = DFW Profitability

FC = Communication Files

DR = Compliance with FL HRS

RD = Rate Rebates

EA = Employee Assistance Programs

UF = U. F. Survey Assistance

NE = Notification of Drug Testing

TM = Top Management's Commitment

MR = Mandatory Governmental DFW

DI = DFW Rate Incentives

DG = Actions Regarding a DFW

CD = Cost of DFW

TD = Time to implement a DFW

QD = Qualified Personnel

LD = Lack of information

LB = Loss of Benefits

**Question # 5: Pre-job Orientation Including DFW
and Substance Abuse**

	Employees						
	<10		10 - 100		>100		Total
	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.	χ^2
Yes	4	9	20	18	14	10	38
No	10	5	8	10	2	6	20
Total	14		28		16		58
χ^2	7.77		0.64		4.27		

$$\text{Interaction } \chi^2 = \Sigma(O-E)^2/E = 11.667$$

$$\text{Degrees of Freedom} = (r-1)(c-1) = (1)(2) = 2$$

$$\begin{aligned} \frac{(4-9)^2}{9} &= 1.778 \\ \frac{(10-5)^2}{5} &= 5.000 \\ \frac{(20-18)^2}{18} &= .222 \\ \frac{(8-10)^2}{10} &= .400 \\ \frac{(14-10)^2}{10} &= 1.600 \\ \frac{(2-6)^2}{6} &= 2.667 \\ \hline 11.667 \end{aligned}$$

$$\begin{aligned} \chi^2_{90} &= 4.61 \\ \chi^2_{95} &= 5.99 \end{aligned}$$

H_0 : Response is independent
of number of employees

Coefficient of Contingency

$$C = \left(\frac{\chi^2}{n + \chi^2} \right)^{1/2} = \left(\frac{11.667}{58 + 11.667} \right)^{1/2} = (0.167)^{1/2} = 0.409$$

C | Relative measure of the degree of
association between the two variables |

Sample Chi-Squared and Coefficient
Figure 3 of Contingency Calculations

indicating a lack of management commitment. The reason for this one negative response was clarified in the closeout survey commentary which stated that the negative response was due to the company's concern over losing a considerable number of employees because of management's belief that the company's employees used drugs.

Comparing top management commitments to the results of companies that have DFW program, it was found that although top management stated that they were committed to a DFW program, their commitment did not always equate to action. The lack of a DFW program was especially prevalent in the

smaller companies. These findings are supported in the general DFW criteria from the closeout survey, which are depicted in Tables 14 and 15 on page 72.

Mandatory Regulations with Respect to a DFW Program

From the results of the closeout survey, it is evident that contractors will conform to DFW requirements if they are mandated. Over 95 percent of the respondents stated they would have a DFW program if it was required by law. Although many of the respondents were outspoken about the issue that they had too many governmental regulations at this time, they would have a DFW program if government mandated this requirement. This finding is what may form the basis of Federal Government intervention into the area of mandatory DFW programs.

Pre-Job Orientation

Pre-job orientation is a frequently used method of communicating a DFW program. Sixty-six percent of the participating contractors indicated that a pre-job orientation program was in place. Pre-job orientation was an area that some contractors were allowing consultants to administer. The consultants were doing the pre-job DFW program orientation as a routine procedure. Large companies have done a considerably better job of communicating their DFW program, but they have not achieved what the State of Florida is attempting to attain in the DFW program, especially in the area of Employee Assistance Programs. The mid-size companies are starting to

develop DFW programs, but the trends are inconsistent in that they are sporadic in meeting various parts of the criteria set by the State of Florida for a DFW.

Rate Incentives

Rate incentives, which have been created by the Florida Legislature to promote SOFA DFW, have shown positive results in this study. Sixty-four percent of the respondents stated that rate incentives would motivate them to develop a DFW program, as shown in Table 9 on page 60. Since the rate incentives do not go into effect until January 1, 1992, many contractors are waiting until a later date to take the necessary actions to actuate the Workers' Compensation rebate.

Lost WC Benefits

Loss of WC benefits should be a primary motivator in developing a DFW. Yet, it is evident from the survey, that according to Table 9 on page 60, the smaller employers do not understand the potential consequences of this benefit. This lack of understanding is also supported in the closeout survey comments in Appendix H.

Monthly Exchange

Motivating contractors to obtain DFW program information in return for participation in providing company background, both on a monthly and baseline basis, produced relevant data. Of the responding contractors, 57 percent stated that the monthly exchange assisted them in their DFW program. As shown in Table 10, this monthly exchange was successful in

communication and generated follow-up from the participants. The follow-up contact consistently demonstrated a sincere interest on the part of the ABC contractors to develop a SOFA DFW program.

Insignificant Motivating Factors

The following is a list of the motivating factors included in the survey which resulted in negative responses, as shown in Table 12 on page 67 and listed below in order of highest negative response.

Compliance with Florida DFW Program

The Drug-free Workplace Programs that are committed to by 95 percent of the contractors' top management are being complied with by only 5 percent of the contractors in setting up a SOFA DFW program. Many contractors have stated they are waiting for more clarification from the State of Florida.

Qualified Personnel to Set Up DFW Programs

According to contractor response in the closeout survey, there appears to be qualified personnel available to communicate a DFW program. This conclusion is based on the finding that 86 percent of the respondents reported that a lack of qualified personnel was not slowing the achievement of a DFW program.

Time to Implement a DFW Program

Seventy-eight percent of the respondents felt the time necessary to implement a drug-free workplace program was not slowing the development of such a DFW program. These same

contractors did not exhibit a clear understanding as to the time associated with the development of a DFW.

Employee Assistance Programs

Lack of information about Employee Assistance Programs, according to 74 percent of the respondents, was not a factor slowing the development of a DFW program. Although top management consistently was committed to a DFW program, they were not committed to supporting an EAP. According to the closeout survey comments shown in Appendix I, it was noted that some companies resented having to spend money on a situation they did not create. This statement is supported by the responses regarding employee access to Employee Assistance Programs, as shown in Table 11. This interaction Chi-square value indicated that there was a significant interaction between construction dollar volume and commitment to an EAP at the 95 percent level of confidence.

Only the companies with a dollar volume over \$100 Million per year displayed a 50 percent positive response, with the exception of two smaller companies. The smaller to medium-sized companies were not conforming to the requirements for the Employee Assistance Programs. The larger companies in both company dollar volume and number of employees projected their top management's commitment to a DFW program, as shown in Table 10. At this juncture, it is important to point out that, from the baseline survey, as compiled in Table 25 on page 83, most of these larger companies had full-time people

directing their safety programs.

Cost to Initiate DFW Programs

The costs involved with developing a DFW program was not a deterrent according to 74 percent of the respondents, as shown in Table 12. As in the case of the costs involved with developing a DFW, the time associated with DFW implementation

Table 10 Primary Motivational Factors in
the Operation of a SOFA DFW program

<u>Factor</u>	<u>% Response Yes</u>	<u>% Response No</u>
—		
Top Management's Commitment	98	2
Mandatory Regulations	95	5
Pre-Job Orientation	66	34
Rate Incentives	64	36
Monthly Exchange	57	43
Average:	79	21

Table 11 EAP CONTRACTOR INVOLVEMENT (Monthly Survey)

<u>Response</u>	<u>Dollar Volume</u>			
	<u><\$5M</u>	<u>\$5 - \$20M</u>	<u>\$20-\$100M</u>	<u>>\$100M</u>
Yes	2	0	4	7
No	16	16	9	7
Total	18	16	13	14

was not understood by the survey respondents. This statement is supported by the closeout survey's commentaries from contractors as shown in Appendix H.

Table 12 Major Factors That are Not
Effecting Operation of a SOFA DFW
(From Closeout Survey)

<u>Factor</u>	<u>% Response Yes</u>	<u>% Response No</u>
Compliance with Florida DFW	95	5
Qualified Personnel	86	14
Time to Implement DFW	78	22
Employee Assistance Program	74	26
Cost to Initiate DFW	74	26
Average:	<u>79</u>	<u>21</u>

State of Florida DFW Program Compliance

Compliance with State of Florida DFW Program

Eighty-nine percent of the respondents said that their programs did not comply with the State of Florida's requirements for a DFW program. The most relevant example of this was that they had not provided the 60-day initial notice to employees of the company's desire to start a SOFA DFW program, as shown in Tables 33 and 34 on pages 152 and 153, respectively.

Compliance with EAP Requirements

Seventy-eight percent of the respondents said their Employee Assistance Programs did not comply with the State of Florida's requirements for a DFW program, as shown in Tables 33 and 34 on pages 152 and 153, respectively. The State's requirements in this area were not fully understood by the respondents in that many thought they had to have in-house programs.

Notice, Education, Testing (NET) in the Last Six Months

Seventy-eight percent of the respondents said their programs did not comply with the State of Florida's NET requirements for a DFW program, as documented in the closeout survey results shown in Tables 33 and 34 on pages 152 and 153, respectively. The education requirements were the main reason for non-compliance. Appendix H illustrates that many contractors repeatedly stated that they believe the State was not clear as to what was required in this area.

Supervisor Training

Sixty percent of the respondents said their supervisor training programs did not comply with the State of Florida's requirements for a DFW program, as shown from the results of the closeout survey compiled in Tables 33 and 34 on pages 152 and 153, respectively. Managers within non-complying contracting firms indicated concerns with DFW information available to them by the State of Florida, as shown in Appendix H.

Company Drug Testing

Fifty-five percent of the respondents said their drug testing programs did not comply with the State of Florida's requirements for a DFW program, as shown in Tables 33 and 34. This non-compliance was primarily because of their using non-state certified laboratories.

New Hires Drug Testing

Sixty-seven percent of the respondents said their DFW programs did not comply with the State of Florida's requirements to test new hires. Table 13 illustrates that the SOFA DFW program is being initiated in multiple formats by an average of 29 percent of the companies interviewed, according to the closeout survey. The 11 percent compliance figure in Table 13 shows a low participation in a program even though a five percent rebate incentive on Workers' Compensation premiums is being offered coupled with the loss of employee benefits for employees testing positive after being involved in an accident.

General Drug-free Workplace Criteria

Analyzing the data obtained in the closeout survey and compiled in the DFW Criteria Tables, Tables 14 and 15, it is clear that "top management's commitment" is the most followed criteria, with 98 percent of the participants stating top managements' commitment to a DFW program. The item with the next largest positive response was the "pre-job orientation",

Table 13 Major Factors Not Being Complied With
Regarding Operating a SOFA DFW (Closeout Survey)

<u>Factor</u>	<u>% Response No</u>	<u>% Response Yes</u>
Compliance with SOFA DFW	89	11
Compliance with EAP Requirements	78	22
N.E.T. in Last Six Months	78	22
Supervisor Training	60	40
Company Drug Testing	55	45
New Hires Drug Testing	57	43
Average:	<u>71</u>	<u>29</u>

with 66 percent of the participants giving a positive response. This percentage figure is inflated because of the high positive response to this question by the larger contractors.

The "new hire drug testing" respondents with positive results were 33 percent, which is low considering this is a key area to prevent drug users from being hired into the company. Drug testing in this case is defined as: any chemical, biological, or physical instrumental analysis administered for the purpose of determining the presence or absence of a drug or its metabolites (Florida Department of Labor and Employment Security, Division of Workers' Compensation, Rule 38F-9). Tables 14 and 15 provide a comparison of how the basic criteria for drug testing for a

DFW program are not being implemented by the smaller contractors. Only two percent of the small contractors are performing "new hire drug testing" and only 45 percent of these companies are doing drug testing in any form.

File development is an activity that was primarily being done by larger contractors. Only 28 percent of the respondents said they were keeping files on DFW related materials.

"Prescription drug abuse education" is one area that appears to be an indicator of a more advanced DFW program development. Most contractors interviewed did not realize that prescription drugs could cause the same change in behavior as illegal drugs. The results from this survey, shown in Appendix G, indicate that only 29 percent of those contractors involved with developing a DFW were monitoring the use of prescription drugs by their employees.

State of Florida Requirements for a DFW

With the exception of the loss of WC benefits, as shown in Tables 16 and 17, all other positive responses were below 50 percent. This response, concerning the loss of Workers' Compensation benefits, is at a 53 percent positive response. This response still should be higher as a contractor's EMR will be directly effected if an employee tests positive after being injured, which will in turn effect WC benefits.

The 28 percent positive response to the question about any activity of the company's DFW program in the last six

Table 14 General DFW Criteria from Closeout Survey (By Size of Workforce)

# EMP.	JT		NH		PD		ST		FC		TM		DT	
<10	<u>4</u>	<u>7%</u>	<u>1</u>	<u>2%</u>	<u>0</u>	<u>0%</u>	<u>1</u>	<u>2%</u>	<u>0</u>	<u>0%</u>	<u>14</u>	<u>24%</u>	<u>1</u>	<u>2%</u>
	10	17%	13	22%	14	24%	13	22%	14	24%	0	0%	13	23%
10-100	<u>20</u>	<u>34%</u>	<u>8</u>	<u>14%</u>	<u>6</u>	<u>10%</u>	<u>11</u>	<u>19%</u>	<u>6</u>	<u>10%</u>	<u>27</u>	<u>46%</u>	<u>11</u>	<u>19%</u>
	8	14%	20	35%	22	38%	17	29%	22	38%	1	2%	17	29%
>100	<u>14</u>	<u>25%</u>	<u>10</u>	<u>17%</u>	<u>11</u>	<u>19%</u>	<u>11</u>	<u>19%</u>	<u>10</u>	<u>18%</u>	<u>16</u>	<u>28%</u>	<u>14</u>	<u>24%</u>
	<u>2</u>	<u>3%</u>	<u>6</u>	<u>10%</u>	<u>5</u>	<u>9%</u>	<u>5</u>	<u>9%</u>	<u>6</u>	<u>10%</u>		0%	2	3%
TOTALS	<u>38</u>	<u>66%</u>	<u>19</u>	<u>33%</u>	<u>17</u>	<u>29%</u>	<u>23</u>	<u>40%</u>	<u>16</u>	<u>28%</u>	<u>57</u>	<u>98%</u>	<u>26</u>	<u>45%</u>
	20	34%	39	67%	41	71%	35	60%	42	72%	1	2%	32	55%

Top = Yes
Bottom = No

JT = Pre-Job Orientation

PD = Prescription Drugs

DT = Drug Testing

TM = Top Management's Commitment to a DFW

NH = New Hire

ST = Supervisors Trained

FC = File Development

Table 15 General DFW Criteria from Closeout Survey (By Dollar Volume)

\$ VOL.	JT		NH		PD		ST		FC		TM		DT	
<5M	<u>8</u>	<u>14%</u>	<u>4</u>	<u>7%</u>	<u>1</u>	<u>2%</u>	<u>5</u>	<u>9%</u>	<u>1</u>	<u>2%</u>	<u>17</u>	<u>29%</u>	<u>4</u>	<u>7%</u>
	10	17%	14	24%	17	29%	13	22%	17	29%	1	2%	14	24%
5M-20M	<u>9</u>	<u>16%</u>	<u>2</u>	<u>3%</u>	<u>2</u>	<u>3%</u>	<u>3</u>	<u>5%</u>	<u>4</u>	<u>7%</u>	<u>16</u>	<u>28%</u>	<u>5</u>	<u>9%</u>
	<u>7</u>	<u>12%</u>	<u>14</u>	<u>24%</u>	<u>14</u>	<u>25%</u>	<u>13</u>	<u>22%</u>	<u>12</u>	<u>20%</u>	<u>0</u>	<u>0%</u>	<u>11</u>	<u>19%</u>
20M	<u>11</u>	<u>19%</u>	<u>5</u>	<u>9%</u>	<u>6</u>	<u>10%</u>	<u>8</u>	<u>14%</u>	<u>4</u>	<u>7%</u>	<u>13</u>	<u>22%</u>	<u>7</u>	<u>12%</u>
	<u>2</u>	<u>3%</u>	<u>8</u>	<u>14%</u>	<u>7</u>	<u>12%</u>	<u>5</u>	<u>9%</u>	<u>9</u>	<u>16%</u>				
>100M	<u>10</u>	<u>17%</u>	<u>8</u>	<u>14%</u>	<u>8</u>	<u>14%</u>	<u>7</u>	<u>12%</u>	<u>7</u>	<u>12%</u>	<u>11</u>	<u>19%</u>	<u>10</u>	<u>17%</u>
	1	2%	3	5%	3	5%	4	7%	4	7%	0	0%	1	2%
Totals	<u>38</u>	<u>66%</u>	<u>19</u>	<u>33%</u>	<u>17</u>	<u>29%</u>	<u>23</u>	<u>40%</u>	<u>16</u>	<u>28%</u>	<u>57</u>	<u>98%</u>	<u>26</u>	<u>45%</u>
	20	34%	39	67%	41	71%	35	60%	42	72%	1	2%	32	55%

months indicated that contractors have not complied with the SOFA program. This response likely reflects the fact that the SOFA DFW program has been in effect only since July 1, 1990.

Table 16 State of Florida Requirements for a DFW (By Dollar Volume)

\$ VOL.	RD		DR		EA		NE		DG		LB	
<5M	<u>4</u>	<u>7%</u>	<u>0</u>	<u>0%</u>	<u>1</u>	<u>2%</u>	<u>1</u>	<u>2%</u>	<u>1</u>	<u>2%</u>	<u>10</u>	<u>17%</u>
	<u>10</u>	<u>17%</u>	<u>13</u>	<u>22%</u>	<u>12</u>	<u>21%</u>	<u>13</u>	<u>22%</u>	<u>13</u>	<u>22%</u>	<u>4</u>	<u>7%</u>
	0	0%	2	4%	0	0%	0	0%	0	0%	0	0%
5M-20M	<u>13</u>	<u>22%</u>	<u>1</u>	<u>2%</u>	<u>4</u>	<u>7%</u>	<u>12</u>	<u>21%</u>	<u>9</u>	<u>16%</u>	<u>12</u>	<u>21%</u>
	<u>15</u>	<u>27%</u>	<u>26</u>	<u>45%</u>	<u>26</u>	<u>45%</u>	<u>16</u>	<u>27%</u>	<u>19</u>	<u>33%</u>	<u>16</u>	<u>27%</u>
	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
20M-100M	<u>3</u>	<u>5%</u>	<u>6</u>	<u>10%</u>	<u>8</u>	<u>13%</u>	<u>14</u>	<u>24%</u>	<u>6</u>	<u>10%</u>	<u>9</u>	<u>15%</u>
	<u>13</u>	<u>22%</u>	<u>10</u>	<u>17%</u>	<u>7</u>	<u>12%</u>	<u>2</u>	<u>4%</u>	<u>10</u>	<u>17%</u>	<u>7</u>	<u>13%</u>
	0	0	5	0%	0	0%	0	0%	0	0%	0	0%
TOTALS	<u>20</u>	<u>34%</u>	<u>7</u>	<u>12%</u>	<u>13</u>	<u>22%</u>	<u>27</u>	<u>47%</u>	<u>16</u>	<u>28%</u>	<u>31</u>	<u>53%</u>
	<u>38</u>	<u>66%</u>	<u>49</u>	<u>84%</u>	<u>45</u>	<u>78%</u>	<u>31</u>	<u>53%</u>	<u>42</u>	<u>72%</u>	<u>27</u>	<u>47%</u>
	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

Top = Yes

Middle = No

Bottom = No Response

RD = Rate Rebate

DR = Drug Testing

EA = EAP

NE = Drug Testing Notification

DG = DFW Six Months

LB = WC Benefits

Table 17 State of Florida Requirements for a DFW (By Size of Workforce)

# EMP	RD		DR		EA		NE		DG		LB	
<10	<u>4</u>	<u>7%</u>	<u>0</u>	<u>0%</u>	<u>1</u>	<u>2%</u>	<u>1</u>	<u>2%</u>	<u>1</u>	<u>2%</u>	<u>10</u>	<u>17%</u>
	<u>10</u>	<u>17%</u>	<u>13</u>	<u>22%</u>	<u>12</u>	<u>21%</u>	<u>13</u>	<u>22%</u>	<u>13</u>	<u>22%</u>	<u>4</u>	<u>7%</u>
	0	0%	2	4%	0	0%	0	0%	0	0%	0	0%
10-100	<u>13</u>	<u>22%</u>	<u>1</u>	<u>2%</u>	<u>4</u>	<u>7%</u>	<u>12</u>	<u>21%</u>	<u>9</u>	<u>16%</u>	<u>12</u>	<u>21%</u>
	<u>15</u>	<u>27%</u>	<u>26</u>	<u>45%</u>	<u>26</u>	<u>45%</u>	<u>16</u>	<u>27%</u>	<u>19</u>	<u>33%</u>	<u>16</u>	<u>27%</u>
	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
>100	<u>3</u>	<u>5%</u>	<u>6</u>	<u>10%</u>	<u>8</u>	<u>13%</u>	<u>14</u>	<u>24%</u>	<u>6</u>	<u>10%</u>	<u>9</u>	<u>15%</u>
	<u>13</u>	<u>22%</u>	<u>10</u>	<u>17%</u>	<u>7</u>	<u>12%</u>	<u>2</u>	<u>4%</u>	<u>10</u>	<u>17%</u>	<u>7</u>	<u>13%</u>
	0	0	5	0%	0	0%	0	0%	0	0%	0	0%
TOTALS	<u>20</u>	<u>34%</u>	<u>7</u>	<u>12%</u>	<u>13</u>	<u>22%</u>	<u>27</u>	<u>47%</u>	<u>16</u>	<u>28%</u>	<u>31</u>	<u>53%</u>
	<u>38</u>	<u>66%</u>	<u>49</u>	<u>84%</u>	<u>45</u>	<u>78%</u>	<u>31</u>	<u>53%</u>	<u>42</u>	<u>72%</u>	<u>27</u>	<u>47%</u>
	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

Constraints of a DFW

Tables 18 and 19 give results that at first review may be confusing. However, a negative response indicates that the four areas in question were not producing a negative effect on the implementation of a DFW program. These four areas were: CD, the cost of the program; TD, the time necessary for the program; QD, a lack of qualified personnel; LD, a lack of information. These questions were designed to identify contractors that were routinely answering in order to quickly complete the survey. There was no indication that contractors were in fact not answering the questions with information to the best of their knowledge.

Overall totals indicate a 78 percent positive response to not being affected by the four major deterrents to implementing a DFW program. The highest response came from the larger contractors, but the second highest response came from the smaller contractors when the size is categorized by workforce.

The group that was most effected by the four constraints was the \$5-20 million contractors, the mid-size contractors. The smaller contractors were effected 12 percent less by the constraints than the mid-size contractors. This may be related to the smaller contractors lack of understanding of the constraints of a DFW, as shown in Appendix H. The cost of implementing a DFW program was the least of the factors that affected the contractors' implementing a DFW program,

Table 18 Constraints of a DFW from Closeout Survey (By Size of Workforce)

# EMP.			TD		QD		LD		TOTAL
<10	<u>3</u>	<u>21%</u>	<u>2</u>	<u>14%</u>	2	14%	4	29%	11 20%
	<u>11</u>	<u>79%</u>	<u>12</u>	<u>86%</u>	12	86%	10	71%	45 80%
	0	0%	0	0%	0	0%	0	0%	0 0%
10-100	<u>7</u>	<u>25%</u>	<u>6</u>	<u>21%</u>	6	21%	10	36%	20 26%
	<u>18</u>	<u>64%</u>	<u>22</u>	<u>79%</u>	22	79%	18	64%	80 71%
	3	11%	0	0%	0	0%	0	0%	3 3%
>100	<u>3</u>	<u>19%</u>	<u>5</u>	<u>31%</u>	0	0%	1	6%	9 14%
	<u>13</u>	<u>81%</u>	<u>11</u>	<u>69%</u>	16		15	94%	55 86%
	0	0%	0	0%	0	0%	0	0%	0 0%
TOTALS	<u>13</u>	<u>22%</u>	<u>13</u>	<u>22%</u>	8	14%	15	26%	49 21%
	<u>42</u>	<u>73%</u>	<u>45</u>	<u>78%</u>	50	86%	43	74%	180 78%
	3	5%	0	0%	0	0%	0	0%	3 1%

Top = Yes CD = Program Cost TD = Time Necessary
Middle = No QD = Qualified Personnel LD = Lack of Information
 Bottom = No Response

Table 19 Constraints of a DFW From Closeout Survey (By Dollar Volume)

\$ VOL.			TD		QD		LD		TOTAL
<5M	<u>4</u>	<u>22%</u>	<u>3</u>	<u>17%</u>	3	17%	4	22%	14 19%
	<u>13</u>	<u>72%</u>	<u>15</u>	<u>83%</u>	15	83%	14	78%	57 79%
	1	6%	0	0%	0	0%	0	0%	1 2%
5M-20M	<u>4</u>	<u>25%</u>	<u>4</u>	<u>25%</u>	4	25%	8	50%	20 31%
	<u>10</u>	<u>63%</u>	<u>12</u>	<u>75%</u>	12	75%	8	50%	42 66%
	2	12%	0	0%	0	0%	0	0%	2 3%
20M-100M	<u>4</u>	<u>31%</u>	<u>3</u>	<u>23%</u>	1	8%	2	15%	10 19%
	<u>9</u>	<u>69%</u>	<u>10</u>	<u>77%</u>	12		11	85%	42 81%
	0	0%	0	0%	0	0%	0	0%	0 0%
>100M	<u>1</u>	<u>9%</u>	<u>3</u>	<u>27%</u>	0	0%	1	9%	5 11%
	<u>10</u>	<u>91%</u>	<u>8</u>	<u>73%</u>	11	100%	10	91%	39 89%
	0	0%	0	0%	0	0%	0	0%	0 0%
TOTALS	<u>13</u>	<u>22%</u>	<u>13</u>	<u>22%</u>	8	14%	15	26%	49 21%
	<u>42</u>	<u>73%</u>	<u>45</u>	<u>78%</u>	50	86%	43	74%	180 78%
	3	5%	0	0%	0	0%	0	0%	3 1%

especially with the larger contractors. The larger contractors were unanimous in stating that cost had no bearing on implementing a DFW program. This finding was consistent with the larger contractors committing funds to DFW implementation prior to the State of Florida incentives being implemented.

Work Dollar Volume Changes

The intent of the investigation into dollar volume changes in contractors work loads was to see if changes in work volume would effect DFW implementation. After a comparative analysis was made of this possible correlation, it was found that no significant relationship existed.

Table 20 and Table 21, on work dollar volume changes, show 55 percent of the contractors on a downward spiral of work. This downward trend is magnified when considering that another 12 percent of the respondents stated no change in their volume. It is also observed that none of the smaller contractors with 10 or less employees have an upward trend.

The larger contractors have shown a 14 percent no change response in their volume. The greatest differential of changes in volume was in the downward trends, with mid-size and smaller contractors showing the largest declines.

Tables 20 and 21 show variation in the size of the companies in dollar volume and size of workforce. While none of the smaller contractors by workforce size showed an upward trend of work, three percent of the smaller contractors by

Table 20 Work Dollar Volume from Closeout Survey
(By Size of Workforce)

No. Empl.	NC	UP	DN	Totals
<10	(4) 7%	(0) 0%	(10) 17%	(14) 24%
10-100	(7) 12%	(4) 7%	(17) 29%	(28) 48%
>100	(8) 14%	(3) 5%	(5) 9%	(16) 28%
Totals	(19) 33%	(7) 12%	(32) 55%	

NC = No Change UP = Up

DN = Down () = Number of Respondents

Table 21 Work Dollar Volume from Closeout Survey
(By Dollar Volume)

\$ Vol.	NC	UP	DN	Totals
<5M	(4) 7%	(2) 3%	(12) 21%	(18) 31%
5M-20M	(4) 7%	(1) 2%	(11) 19%	(16) 28%
20M-100M	(5) 9%	(3) 5%	(6) 10%	(14) 24%
>100M	(6) 10%	(1) 2%	(3) 5%	(10) 17%
Totals	(19) 33%	(7) 12%	(32) 55%	

dollar volume showed work increases.

Communications Results

Methods of communicating the DFW program were determined from the baseline questionnaire and from the closeout survey. From Table 22, which includes all participants in the baseline survey, several methods of communicating safety were determined. Some of the most notable methods were toolbox meetings, paycheck inserts, newsletters, and the AGC safety van. The Associated General Contractors' safety van is a motorized public service vehicle that is used to give demonstrations on proper safety methodology and use of safety equipment. The results from the closeout survey are depicted in Table 23 on page 81 by size of workforce and in Table 24 on page 81 by dollar volume.

Baseline survey

Toolbox meetings were the most-used method of communicating safety, with 68 percent of the participants responding positively to the question. The positive response to this question was 16 percent higher than the next-most-used communication method, safety meetings. Although toolbox meetings are a form of safety meeting, 32 percent of the responding contractors did not make this differentiation.

Paycheck inserts are a method of communicating safety that 40 percent of the contractors utilized. This method of communication requires more effort and cost. With 98 percent of the contractors stating a commitment to a DFW, only 28

Table 22 Methods of Safety Communication
(From Baseline Questionnaire)

#	NS		SM		TO		PY		AV		GL		MT		WM	
132	N		Y		Y		N		Y		Y		Y		N	
131	Y		Y		Y		Y		Y		Y		Y		N	
127	N		N		Y		N		N		N		Y		N	
150	N		Y		Y		Y		N		N		N		N	
002	Y		Y		Y		N		N		N		N		N	
035	N		N		N		N		N		N		N		Y	
037	N		N		Y		N		N		N		N		N	
153	N		N		Y		N		N		Y		N		N	
066	N		N		Y		Y		N		N		N		N	
071	N		N		Y		Y		N		N		N		N	
091	N		Y		N		N		N		N		N		N	
098	Y		Y		Y		N		N		N		Y		N	
093	N		Y		N		Y		N		N		N		N	
109	N		N		Y		N		N		N		N		N	
106	Y		Y		Y		Y		N		N		N		N	
162	N		N		Y		N		N		Y		Y		N	
168	N		N		N		N		N		N		N		Y	
169	N		Y		Y		N		N		N		N		N	
171	N		N		N		N		N		N		N		Y	
130	N		Y		N		N		N		N		N		N	
202	Y		N		Y		Y		N		N		Y		N	
048	N		N		Y		N		N		N		Y		N	
049	N		Y		N		Y		N		N		N		N	
005	N		Y		Y		Y		N		N		N		N	
155	Y		Y		N		Y		N		N		N		N	
TOTALS	<u>6</u>	<u>24%</u>	<u>13</u>	<u>52%</u>	<u>17</u>	<u>68%</u>	<u>10</u>	<u>40%</u>	<u>2</u>	<u>8%</u>	<u>4</u>	<u>16%</u>	<u>07</u>	<u>28%</u>	<u>3</u>	<u>12%</u>
	19	76%	12	48%	8	32%	15	60%	23	92%	21	84%	18	72%	22	88%

Top = Yes
Bottom = No

= Contractor Number
NS = Newsletters
SM = Safety Meetings
TO = Toolbox Meetings
PY = Paycheck Insert
AV = AGC Van
GL = Guest Lectures
MT = Management Training
WM = Word-of-Mouth

percent of the same contractors communicated safety through management training.

Newsletter communication, at 24 percent, shows less than one-fourth of the contractors communicating safety through this method. Of all the contractors that communicated safety through newsletters, none of these same contractors communicated safety through word-of-mouth.

The AGC Van, as a method of communication, was a write-in option chosen by two of the contractors, or eight percent. This van is a mobile vehicle, sponsored by the Associated General Contractors, that travels to job sites carrying safety equipment and educational materials designed to assist contractors in their understanding of construction safety. The percentage of utilization of this method may have been higher if it had appeared on the selection list.

Closeout survey

Of the six classifications given for the method that the contractors communicated a DFW program, the size of the contractor had little effect on the results. The larger contractors were unanimous on two communication methods, in stating they did not communicate through word-of-mouth and all had a DFW program policy. None of the small contractors used all four communication methods.

The most commonly used method of communication was safety meetings, with 37 percent of the respondents affirming their use. This finding is consistent with OSHA's requirement for

Table 23 Communications Results from Closeout Survey (By Size of Workforce)

# EMP	NS	WM	SM	JO	AL	NP
<10 (14)	(4)	(4) 29%	(3) 21%	(1) 7%	-0- 0%	(3) 21%
10-100 (28)	(5) 16%	(3) 11%	(13) 46%	(3) 11%	(4) 14%	(3) 11%
>100 (15)	(6) 35%	-0- 0%	(7) 44%	(1) 6%	(3) 19%	-0- 0%
TOTALS (58)	(14) 24%	(7) 12%	(23) 40%	(5) 9%	(7) 12%	(6) 10%

NS = Newsletters

WM = Word of Mouth

SM = Safety Meetings

JO = Pre-job Orientation

AL = All

NP = No Policy

Table 24 Communications Results From Closeout Survey (By Dollar Volume)

\$ VOL.	NS	WM	SM	JO	AL	NP
<5M (18)	(3)	(3) 17%	(7) 39%	(2) 11%	-0- 0%	(4) 22%
5-20M (16)	(5) 31%	(3) 19%	(4) 25%	-0- 0%	(2) 13%	(2) 13%
20-100M(13)	(3) 23%	(1) 8%	(8) 62%	(2) 15%	(2) 15%	-0- 0%
>100M (11)	(3) 27%	-0- 0%	(4) 36%	(1) 9%	(3) 27%	-0- 0%
TOTALS (58)	(14) 24%	(7) 12%	(23) 40%	(5) 9%	(7) 12%	(6) 10%

- Note: 1) The percentages in the body of these tables is based on the amount of positive responses per category divided by the number of participants in that category.
- 2) The percentages in the totals are the amounts of positive responses divided by the 58 respondents.

general contractor safety communication. In contrast, job orientation was the least-used method of communication.

DFW Activity vs Safety Activity

Table 25 shows that the communication of a DFW is well behind the communication of safety. The 44 percent positive response on both the Drug Testing and the Drug Education was 20 percent less than Safety Orientation by the same contractors.

With 96 percent of the respondents from the baseline survey stating they were training supervisors and also conducting safety inspections, these same contractors had only 44 percent positive response in conducting drug education and meeting drug testing requirements. This finding indicates that safety activities were being accomplished twice as frequently as most similar DFW activities.

The DFW activity and the company having a full-time safety director do not appear to have a relationship. Of the 12 contractors that had a full time Safety Director only four had Drug Education and Drug Testing.

There was a large variation in the response to job orientation. Three of the contractors had no job orientation whatsoever, while seven contractors conducted job orientation on all 20 items, shown in the baseline survey in Appendix B. The two contractors that conducted training in 90 percent of the orientation items did not include drug testing orientation.

Table 25 DFW Activity vs. Safety Activity Communication
(From Baseline Questionnaire)

#	JO/DTR	JO/DE	JO/%	SO	FSD	JSP	SST	SI
132	N	Y	75%	Y	Y	Y	Y	Y
131	Y	Y	95%	Y	Y	Y	Y	Y
127	N	N	0%	N	Y	N	Y	Y
150	N	Y	79%	Y	N	Y	Y	Y
002	Y	Y	100%	Y	N	Y	Y	Y
035	N	N	10%	N	N	N	N	N
037	Y	Y	95%	Y	Y	Y	Y	Y
153	N	N	0%	N	N	Y	Y	Y
066	N	N	90%	N	Y	Y	Y	Y
071	Y	N	50%	Y	Y	Y	Y	Y
091	N	N	85%	Y	N	Y	Y	Y
098	Y	N	85%	Y	Y	Y	Y	Y
093	N	N	0%	N	N	Y	Y	Y
109	Y	Y	100%	Y	N	Y	Y	Y
106	N	Y	90%	Y	Y	Y	Y	Y
162	Y	Y	100%	Y	N	Y	Y	Y
168	N	N	5%	Y	N	N	Y	Y
169	N	Y	90%	Y	Y	Y	Y	Y
171	N	N	70%	N	Y	Y	Y	Y
130	N	N	85%	Y	Y	Y	Y	Y
202	Y	Y	65%	N	Y	Y	Y	Y
048	Y	Y	100%	N	N	Y	Y	Y
049	N	N	60%	N	N	N	Y	Y
005	Y	N	80%	Y	N	Y	N	Y
155	Y	Y	100%	Y	N	N	Y	Y
TOTALS	<u>11</u> 44% 14 56%	<u>11</u> 44% 14 56%	<u>Mean</u> 68%	<u>16</u> 64% 9 36%	<u>12</u> 48% 13 52%	<u>20</u> 80% 5 20%	<u>24</u> 96% 1 4%	<u>24</u> 96% 1 4%

Top = Yes
Bottom = No

= Contractor Number
JO = Job Orientation
DTR = Drug Testing Requirement
DE = Drug Education
JO% = Percentage of Items Taught at JO
SO = Safety Orientation
FSD = Full Time Safety Director
JSP = Job Designated Safety Person
SST = Supervisor Safety Training
SI = Safety Inspection

The results from the Job Designated Safety Person question show that 80 percent of the contractors are designating someone on the job site to handle safety, as shown in Table 25. Although this statistic independently looks good, the qualifications of this designated person are questionable. This statement can be made because of the lack of supervisor training as documented in Table 9, page 60.

EMR & OSHA Incident Rate Activity vs. DFW Activity

Table 26 shows how the EMR and the OSHA Form 200 relate to the contractors' drug-free workplace programs. After a review of the data from both a descriptive and analytical perspective, it appears that there is no correlation between the safety indicators of the EMR and the OSHA Form 200 with respect to the DFW activity in this time period.

With the EMR trend up in 40 percent of the larger contractors and only 10 percent of the contractors with a downward trend, an increase in insurance will be in effect for 40 percent of the larger contractors. A similar condition is occurring on the OSHA Form 200 results, which indicates more accidents in 50 percent of the larger contractors surveyed. Only 20 percent of the larger contractors showed a downward trend.

Table 25 and Table 26 are similar in that they are both intended to show correlations between safety and the DFW. The results of the descriptive statistics show some correlation between safety and the DFW. The larger contractors were the

Table 26 EMR & OSHA Activity vs. DFW program Activity
from Closeout Survey (Monthly Participants)

#	WF	VOL	EMR	OSHA 200	GD	CO	SOF	CON
132	LG	LG	TU	TD	ME	ME	ME	AM
131	LG	LG	TD	TU	AM	AM	AM	ME
127	LG	MED	TC	TU	MB	AM	AM	ME
155	LG	LG	TU	TU	AM	ME	AM	AM
5	LG	MED	TU	TD	AM	AM	AM	AM
14	LG	LG	TC	TU	AM	AM	AM	AM
148	LG	MED	TC	TC	BM	ME	BM	AM
98	LG	LG	TC	TC	AM	AM	AM	ME
169	LG	MED	TC	TC	ME	AM	ME	ME
88	LG	LG	TU	TU	AM	BM	AM	AM
2	MED	BM	TD	TU	ME	AM	ME	BM
9	MED	SM	TC	TC	BM	AM	ME	ME
37	MED	LG	TC	TD	AM	BM	BM	AM
71	MED	MED	TC	TD	ME	AM	AM	BM
91	MED	MED	TC	TU	ME	AM	AM	BM
91	MED	MED	TU	TD	BM	AM	ME	BM
106	MED	MED	TD	TD	BM	AM	AM	ME
162	MED	MED	TC	TD	BM	AM	AM	AM
171	MED	MED	TD	TU	ME	AM	ME	ME
130	MED	MED	TD	TD	ME	BM	SM	AM
202	MED	SM	TD	TD	BM	BM	BM	ME
48	MED	MED	TU	TU	BM	AM	ME	AM
49	MED	MED	TC	TC	ME	AM	BM	AM
154	SM	MED	TU	TD	BM	AM	BM	AM
109	SM	SM	TC	TC	BM	ME	BM	AM

= Contractor Number

GD = General Drug Free Workplace Criteria

CO = Communications Results From CS

SOF = SOF Requirements for DFW From CS

CON = Constraints on a DFW

AM = Above Mean

CS = Closeout Survey

TU = Trend Up

ME = Mean

WF = Workforce

TD = Trend Down

BM = Below Mean

VOL = Volume

TC = Trend Consistent w/in
10% of Last 3 Years

LG = Large Size Contractor: >\$100M/yr.; >100 EME

SM = Small Size Contractor: <\$5M/yr.; <10 EME

MED = Medium Size Contractor: \$6M-100M/yr.; 10-100 EME

basis for the above analysis because the smaller contractors were heavily involved with brokering their work which would give very low, unrepresentative results for analysis.

The EMR is calculated based on the safety cost record for three years prior to the last year. Table 26, does not show any relationship with the EMR to the DFW. This result is to be expected in that the EMR records activity over the three previous years and the SOFA DFW was less than one year old at the time of this study.

Regression Analysis: First Sample

Figure 4 shows the flow of the regression analysis for the models using "drug testing" as the dependent variable. The initial model contained an intercept term (ONE), an education variable (EDUC), a firm size variable (SIZE), a safety variable (TRSUP), a communication variable (ORIENT), a rate incentive variable (RATEINC), and a Workers' Compensation loss variable (WKCOMP). Note that Appendix M reports on a model preceding this one in which an inferior dependent variable was used.

The first estimation of this model, as shown in Table 36 on page 183, revealed two firms which were so unlike the others that they were dropped as outliers based upon standardized residuals. A second estimation spotlighted four insignificant variables as indicated by t-statistics: EDUC, ORIENT, RATEINC, TRSUP. A third estimation, using the smaller set of independent variables was also evaluated for

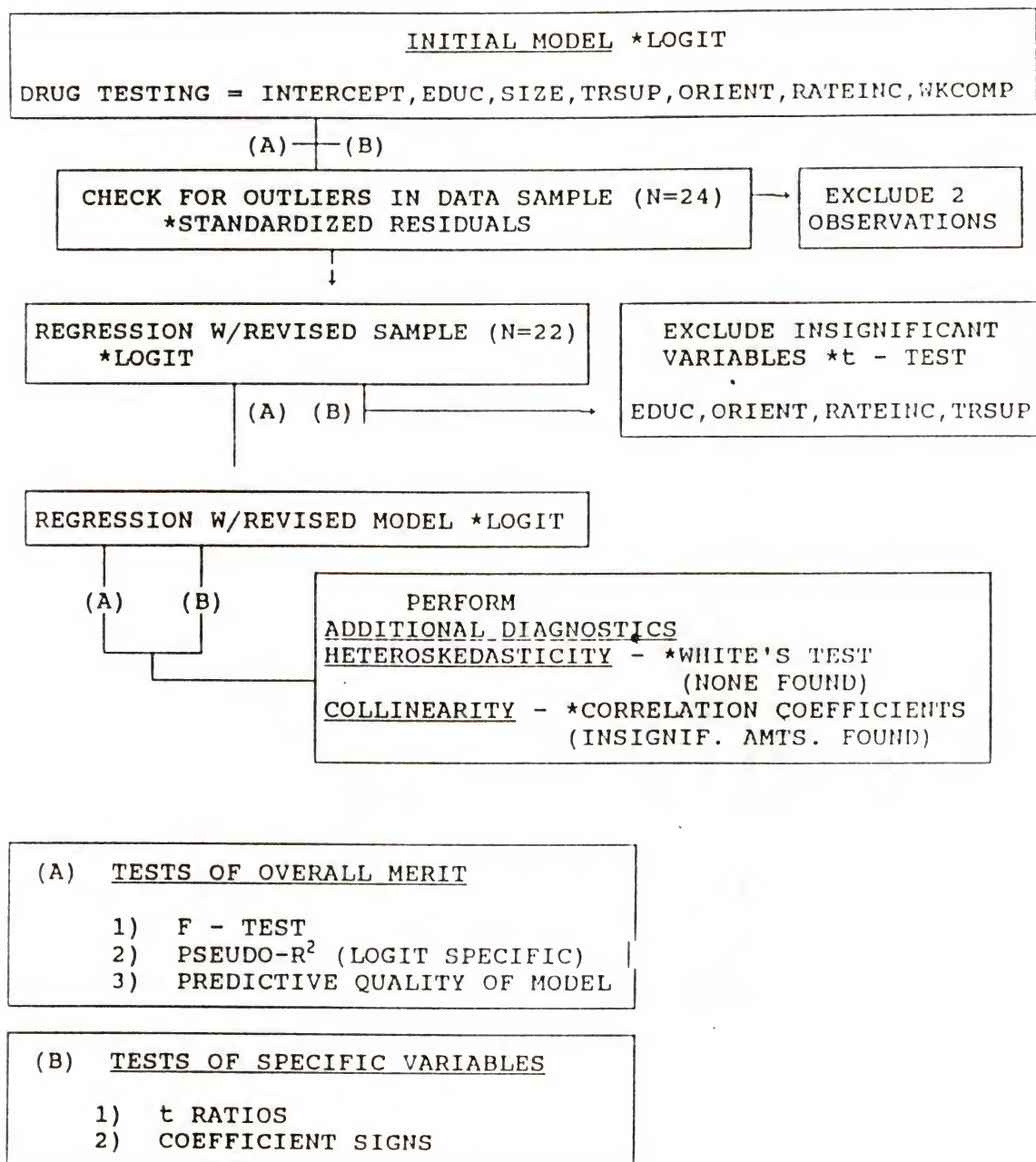
heteroskedasticity and collinearity among the remaining independent variables. Neither hetroskedasticity nor collinearity were found in the regression analysis results. Tests of the model's overall merit and of the significance of specific variables, as shown in Figure 4, were conducted at each estimation stage.

The current model uses drug testing as a dependent variable, with the effect of company size and the effect of Workers' Compensation benefits being eliminated for employees who, after an accident, test positive for drugs as independent variables.

In addition to the above, the model has shown a possible relationship between Workers' Compensation rate rebates and the loss of Workers' Compensation benefits for employees that test positive after an accident. After the validity testing is accomplished, this correlation will be re-evaluated.

The following is an analysis of Table 39, page 186, and other findings, prior to administering the validity survey.

- 1) Overall Relationship: The chi-square statistic shows there is a significant relationship between drug testing and the two independent variables.
- 2) Goodness-of-Fit: The pseudo- R^2 indicates that the two independent variables are explaining 69 percent of the variation of drug testing across firms. The best possible performance would be explaining 100 percent.



* Indicates test or process followed

Figure 4 Model Design

Table 27 Final Model Regression Estimation Results:
 Combined Sample

Dependent Variable is TEST ₁		
Variable	Coefficient	t-ratio
ONE	-1.42287	-.9682
SIZE	.09451	1.8174
WKCOMP	-3.55904	-1.6881
Sample Size	22	
Chi-Square Statistic	19.915	
Pseudo-R ²	.69	
Correct Model Predictions (%)	.91	

, See Figure 15 for variable definitions

- 3) The Signs of the Coefficients of SIZE and WKCOMP: The positive sign of SIZE reveals that larger firms are more likely to have a DFW program. The negative sign of WKCOMP indicates that the contractors are negatively influenced by the benefit elimination in making their decision to do testing.
- 4) The Statistical Significance of SIZE and WKCOMP: Both variables are marginally significant. SIZE is significant at an 81 percent (approximately) level of significance and WKCOMP is also significant at an 81 percent (approximately) level of significance.
- 5) Predictions: The model predicts correctly whether a firm does or does not test 91 percent of the time (20 firms out of 22) within the sample from which it was

estimated.

- 6) Sample Size: The sample firms were consistent in their characteristic.
- 7) Heteroskedasticity: Using White's test, the standard test used to check heteroskedasticity, there was no evidence found of this condition being a significant problem.
- 8) Collinearity: Using both correlation coefficients and regression analysis, no significant correlation among the independent variables was found.
- 9) Safety Variables: It was found that there was no significant relationship between safety activities and DFW program activities, which also is consistent with the descriptive statistics in Tables 25 and 26.
- 10) Communication: It was found that there was no significant relationship between communication and DFW program activities.
- 11) Education: It is shown in Table 38, page 185, that firms that are notifying and testing are not educating their employees.
- 12) The Dependent Variable: TEST (whether the firm does any drug testing: closeout questionnaire #13) was chosen for two reasons. The first choice - "has company done anything in the last 6 months regarding a DFW program?" - may have been questionably phrased, leading to possibly misleading answers. Hence, it was seen as potentially flawed and a poor choice for the dependent variable.

Second, the current variable is the best quantifiable measure of whether or not a firm has the essential elements of a DFW program in place. Notification and testing are closely correlated (.91), meaning that firms which are notifying are likely to be testing. Thus, a firm which is testing is also most likely practicing 2 of the 3 elements needed for a DFW program. Consequently, the variable "TEST" adequately captures whether or not a firm has a DFW program.

Regression Analysis: Validity Sample

The validity sample results suggest that the relationships found in the original sample were not confirmed in the validity sample. This finding suggests further testing would be appropriate only after the SOFA DFW has had time to be further implemented. In further testing it must be recognized that this model using the ABC as a population has been exhausted. Additional testing will require a new population.

Synergy Review

Because the quantitative analysis did not clearly identify any factors that worked in conjunction with one another, the synergy analysis was not able to be conducted. The review would have involved an investigation into any factors that were working in harmony with each other to create a greater end result. This is where one factor works with

Table 28 Final Model Regression Estimation Results:
Validity Sample

Dependent Variable is TEST ₁		
Variable	Coefficient	t-ratio
ONE	-1.48195	-1.9377
SIZE	-.00781	1.2030
WKCOMP	-.39746	-.3134
Sample Size	22	
Chi-Square Statistic	1.734	
Pseudo-R ²	.07	
Correct Model Predictions (%)	.73	

₁ see Figure 15 for Variable Definitions

another factor to create a combined result greater than the two factors individually added together (Myers, 1989).

Summary

The model functioned well using original data. The validity sample was an indicator of the need for an expanded population and larger sample which can only be conducted after the SOFA DFW has been implemented over a longer period of time. At the same time synergistic activity could be investigated, the ABC general contractors were thoroughly evaluated as to their safety and DFW activity, as documented by the results of the baseline survey form as shown in Appendix B. These contractors were also more thoroughly evaluated as to their DFW activities through the use of the

monthly and closeout surveys as shown in Appendix C and Appendix F, respectively.

CHAPTER V MAGNITUDE OF FACTORS IN THE DFW

Introduction

This chapter is a descriptive measure of the activities that the general contractor members of the ABC are currently undertaking with respect to their DFW programs. Using the characteristics and major factors matrixes shown in Tables 29 and 30, the magnitude of their activities has been evaluated.

Notice, Education, and Testing (NET) are the order of priority in developing a DFW program. The 60-day notice to employees of intent to have a DFW program, as required under Florida State Law, is the primary action that needs to occur to start the process moving. A State of Florida approved DFW program cannot exist without the notice requirements, but as shown in Table 29, only the larger contractors are following this requirement as a priority.

Both Tables 29 and 30 give indications of contractors' commitment to the DFW. Pre-job orientation was the only variable, shown in Table 29, used by all contractors to communicate a DFW. From the results shown in Table 30, top management is committed to a DFW program. These variables, pre-job orientation and top management commitment, were the only ones that were consistently significant with all the contractors.

Funding is one of the major requirements needed for a DFW program. Yet, Table 30 indicates that lack of funding is not hindering DFW development. Seventy six percent of the respondents stated that the cost of the DFW program is not slowing its development. However, this financial necessity may be an excuse used by contractors that are concerned about making the commitment for a DFW.

Table 29 Major Factors Matrix
(From Closeout Survey)

MAGNITUDE	SMALL	MEDIUM	LARGE
Most Followed DFW program Concept	5, 10	5	5, 13, 16
Mid-Range in Following DFW program Concept	6, 8, 13,	6, 7, 8, 9 10, 13, 16	6, 7, 8, 9
Least Followed DFW program Concept	7, 9, 14, 15, 16	14, 15	10, 14, 15

Small: <10 Employees / <\$5M Yearly Volume
Medium: 10 - 100 Employees/ \$5M - \$100M Yearly Volume
Larger: >100 Employees / >\$100M Yearly Volume

5 = Pre-Job Orientation on a DFW program
6 = New Hires Tested for Drugs
7 = Prescription Drug Communication
8 = Supervisor Training in DFW program
9 = Developing Files on Communication a DFW program
10 = Rate Rebates Effect on Complying with a DFW program
13 = Drug Testing
14 = Compliance with SOFA DFW program
15 = Availability of EAP
16 = Notification of Employees re: DFW

Table 30 Company Size Characteristics Matrix (from Closeout Survey)

MAGNITUDE	SMALL	MEDIUM	LARGE
Most Important	12, 17	12, 17	12, 23
Upper Importance	18, 22, 23	18, 22, 23	17, 18, 24
Lower Importance	19, 21	19, 21, 24	21, 22
Least Important	24, 25	25	19, 25

Small: <10 Employees / <\$5M Yearly Volume
Medium: 10 - 100 Employees / \$5M - \$100M Yearly Volume
Larger: >100 Employees / >\$100M Yearly Volume

12 = Top Management's Commitment to a DFW program
17 = Compliance with Government Mandated Requirements
18 = Increased Profitability of a DFW program
19 = Rate Incentives as a Motive
21 = Cost of DFW program Slowing Implementation
22 = Time to Implement Slowing DFW program
23 = Lack of Qualified Personnel Slowing Implementation
24 = Lack of Necessary Information Slowing Implementation
25 = Loss of WC Benefits

Summary

These matrices in Tables 29 and 30 show a desire by top management to support DFW programs, but at the same time show a lack of understanding of one of the most important benefits of a DFW program - that being the loss of Workers' Compensation benefits for workers testing positive after having an accident. The other area that supports this premise is that few companies have an understanding as to the EAP requirements, since many thought they had to have an in-house EAP.

At this juncture, it appears clear that the SOFA DFW rules are not understood by the responsible people who are charged with developing a DFW. In this regard, the State of Florida has not done an effective job of disseminating DFW information.

CHAPTER VI SUMMARY AND OBSERVATIONS

Introduction

The summary and observations portion of this research is intended to give an overview of the items and their sub-components that work in developing safety communications for creating a drug-free work site. There were many factors that were taken into consideration in the initial phase of this research which have lead to numerous observations. For example, changes in volume of work under contract may have an effect on how the contractor communicates safety and a DFW program. A contractor on a downward spiral of work may be less inclined toward any program from which he would not be receiving benefits prior to his work backlog ending. In observing something as dynamic as the construction industry, it is important to keep an overview and not become diverted from the goal of identifying the factors that effect the development of a drug-free workplace.

The motivating factors in the findings sections of this research show areas of commitment that the construction industry will be facing in successfully developing a drug-free workplace. The following is a review of the original hypotheses and a summary of their validity from this research.

Original Hypotheses Validity Summary

H_1 : "Incidence of DFW pre-job orientation is independent of contractor size" was rejected at the 99 percent confidence level, as shown in Table 9 on page 60 and as described in Figure 5. The reasons for this relationship include the fact that pre-job orientation is a cost that larger contractors with larger projects can more readily justify. There is also the length-of-job consideration. Smaller contractors often have many smaller, fragmented jobs that have many start and stop situations, whereas larger jobs do not normally stop and start due to the excessive cost involved.

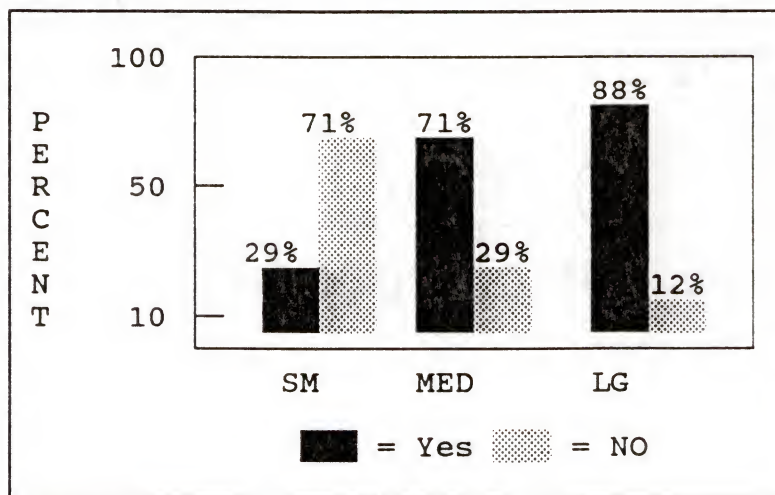


Figure 5 Pre-Job Orientation

H_2 : "Incidence of drug testing for new employees is independent of contractor size" was rejected at the 99 percent level of confidence, as shown in Table 9 on page 60 and described in Figure 6. These results indicate that the larger contractors are doing significantly more drug testing for new employees at this time. This observation was reaffirmed with regression analysis at the 0.90 level of significance, as shown in Table 27, page 89.

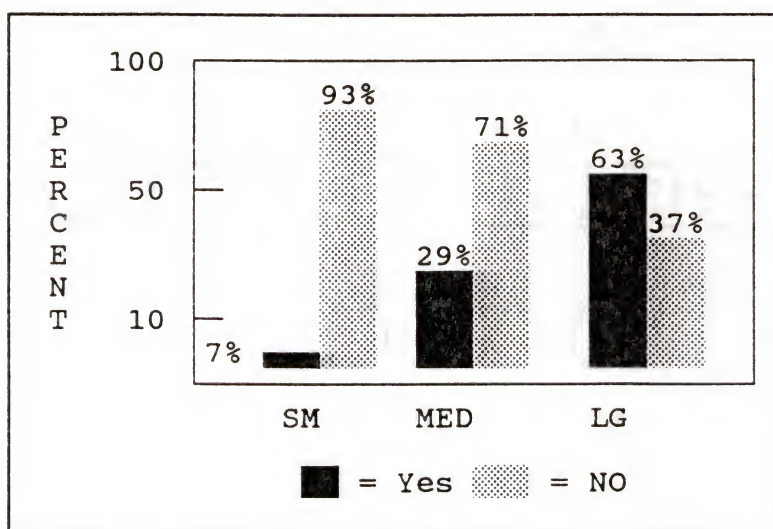


Figure 6 New Hire Testing

"H₃: Incidence of communicating the dangers of authorized prescription drugs is independent of contractor size" was rejected at the 99 percent level of confidence, as shown in Table 9 on page 60 and described in Figure 7. The significance of the interaction chi-square value was related to the fact that larger contractors have a complete prescription drug program, while the opposite situation was found for smaller contractors, as analyzed from Table 9. The smaller contractors in the study had not been addressing the issue of prescription drugs. The mid-size contractors were just starting to get involved in programs dealing with prescription drug control on the job site, with only 21 percent of this size range being involved, as documented in Table 9, page 60.

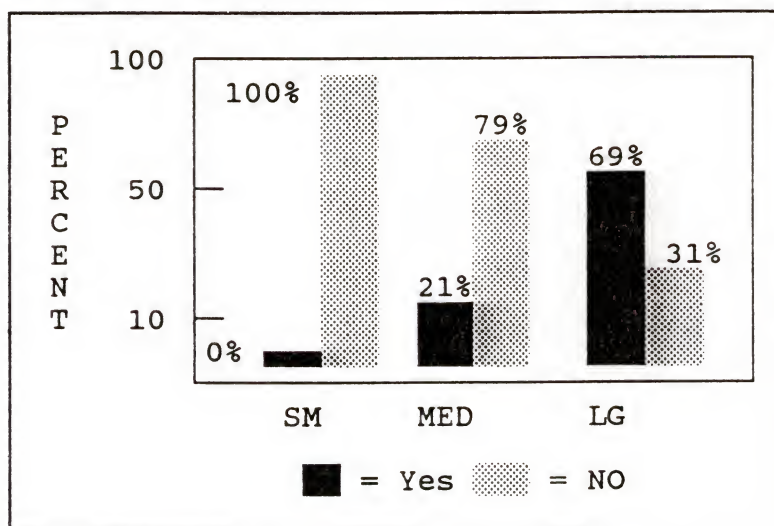


Figure 7 Prescription Drugs

"H₄: The incidence of DFW training programs for supervisors is independent of company size" was rejected at the 99 percent level of confidence. The data shown in Figure 8 indicate that the larger companies in the survey had active training programs; smaller companies in the sample were virtually void of training programs; and the mid-size contractors reported that 39 percent of the companies were involved with such training, as shown in Table 9 on page 60.

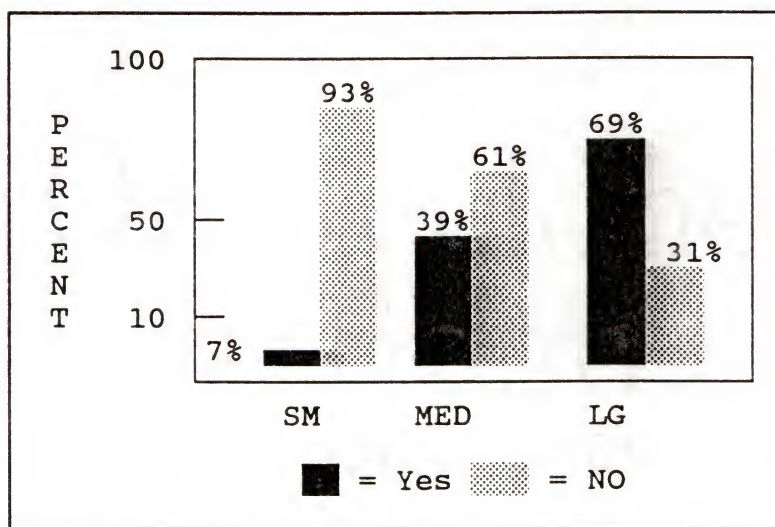


Figure 8 Supervisor Training

"H₅: Creating and maintaining files on DFW program and EAP are actions that are independent of company size" was rejected at the 99 percent level of confidence, as shown in Table 9 on page 60. From Figure 9, it is clear that the larger contractors almost exclusively are keeping files on the DFW program and EAP, which is required to fulfill the EAP requirements to be in compliance with the State of Florida Drug-Free Workplace.

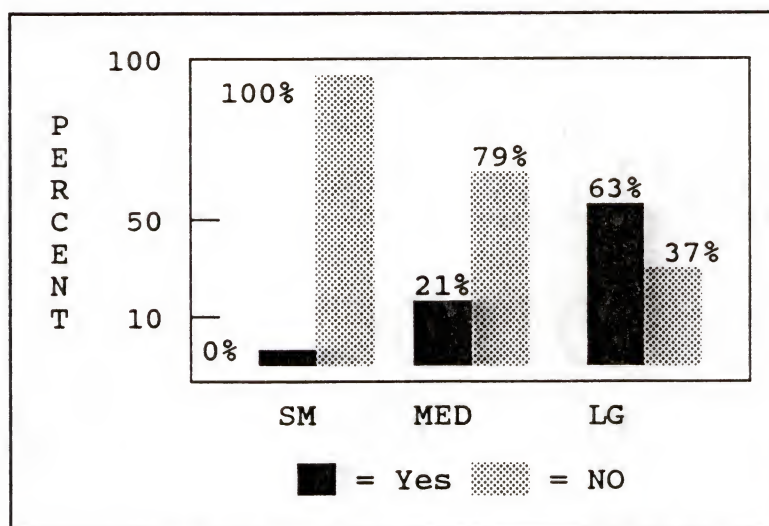


Figure 9 Developing Files on DFW & EAP

" H_0 : The incidence of overt management commitment to a DFW is independent of company size" was accepted without computing the interaction chi-square statistic, as shown in Table 9 on page 60 and described in Figure 10. This action resulted from the observation that nearly all companies in all three size categories reported management commitment. Only one company indicated "no" to the question of management commitment.

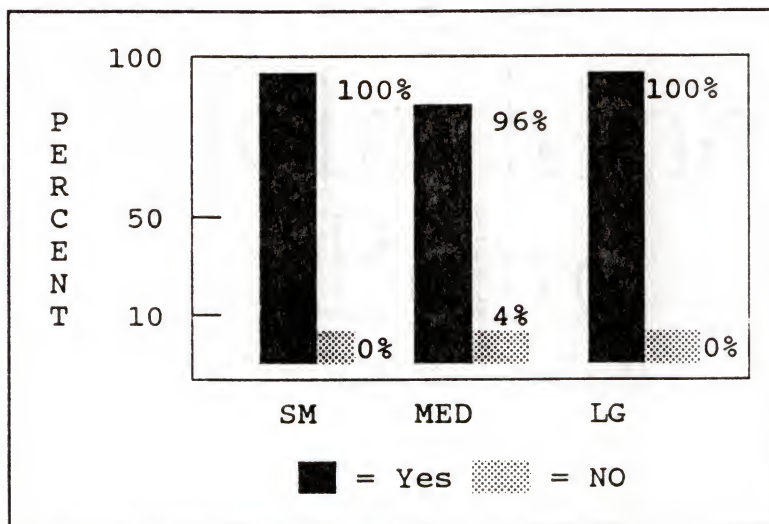


Figure 10 Management Commitment to a DFW

"H₇: The incidence of drug testing is independent of company size" was rejected at the 99 percent level of confidence, as shown in Table 9 on page 60 and described in Figure 11. It was clear the smaller contractors in this survey displayed little or no involvement in drug testing. The mid-size contractors had a 39 percent participation in drug testing.

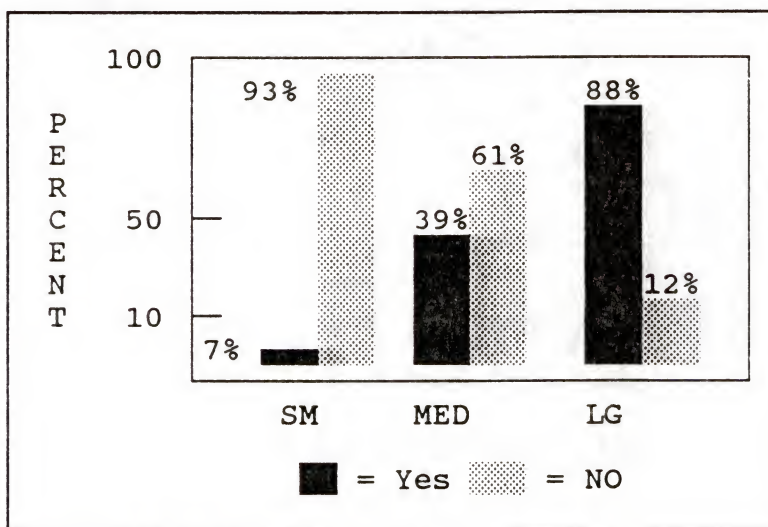


Figure 11 Employee Drug Testing

"H₈: The incidence of availability of an EAP is independent of company size" was rejected at the 95 percent level of confidence. Figure 12 shows that half of the larger companies are offering EAP's; mid-size contractors, like the smaller contractors, are doing very little in this regard, with 14 percent or less doing anything.

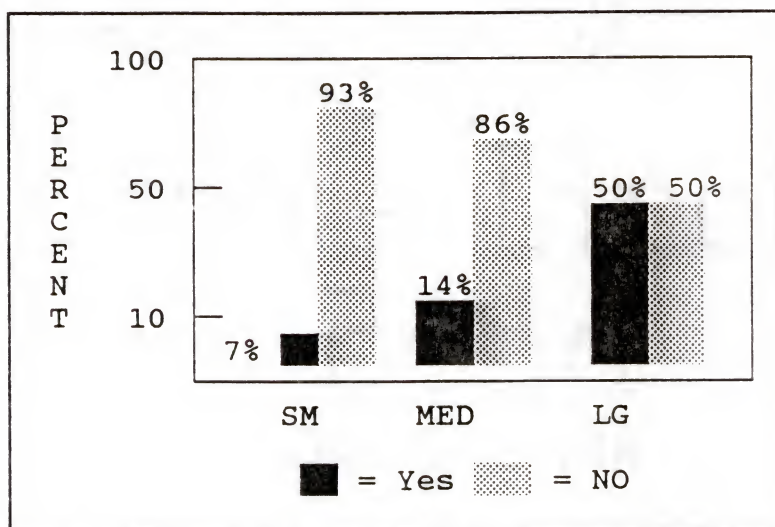


Figure 12 Employee Assistance Programs

"H₀: Incidence of drug testing notification is independent of company size" was rejected at the 99 percent level of confidence, as shown in Table 9 on page 60. This notification is a requirement of the State of Florida to comply with the DFW program to attain rebate. With a 99 percent level of confidence, it is clear that the larger contractors have begun to notify their employees of their intent to test for drugs, and 43 percent of the mid-size contractors have also fulfilled this requirement, as shown in Figure 13. Only one small company reported a drug test notification program in place.

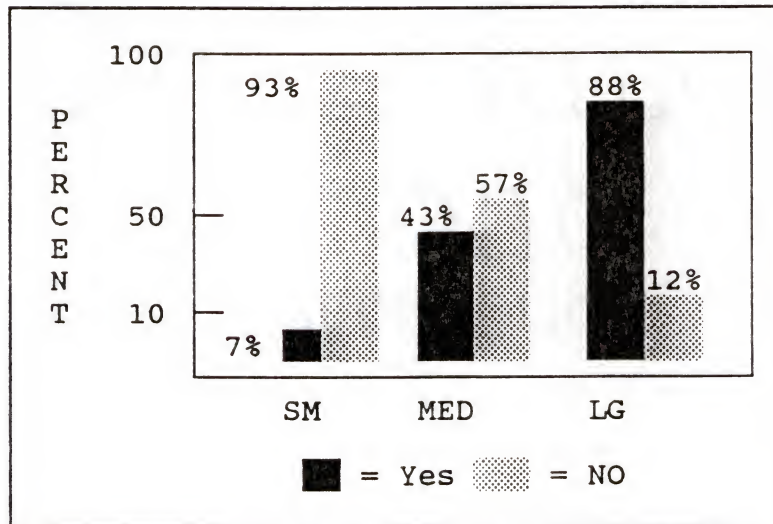


Figure 13 Notification of Drug Testing

"H₁₀: Lack of information is slowing the SOFA DFW program for all size companies" was rejected, as shown in Figure 14. A substantial portion of all sizes of contractors stated this was not a problem. At a 90 percent level of confidence, it is evident the larger contractors are more current on the information than the small and mid-size contractors.

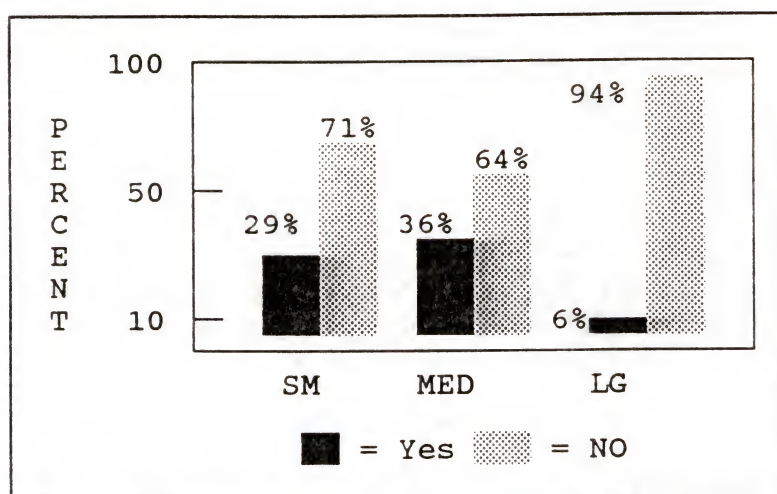


Figure 14 Lack of Information On DFW

"H₁₁: The rate rebate has no effect on a company's participation in a DFW program" was not rejected. The regression analysis results as shown in Table 37 showed, because of a negative sign, that the Workers' Compensation rate rebate was not a positive influence on contractors developing a DFW program.

"H₁₂: The loss of Workers' Compensation benefits for an employee testing positive after an accident will have no effect on a contractor's participation in a DFW program" was not rejected. The regression analysis indicated that loss of

benefits was not a significant positive influence on contractors developing a DFW program, as shown in Table 37 on page 184.

"H₁₃: A contractor's having a good safety program has no effect on the development of a DFW" was not rejected. There was no evidence of correlation between safety and the DFW, as documented in Table 36 on page 183.

"H₁₄: Communication is not an important consideration for contractors in developing a DFW program" was not rejected. Neither the closeout survey regression analysis as shown in Table 37 on page 184 nor the descriptive statistics shown in Tables 23 - 25 showed communication as an important consideration for developing a DFW. These results, as explained previously, may be biased because of the relative newness of the SOFA DFW.

H₁₅: The constraints of (a) cost of starting a DFW program; (b) lack of time necessary; (c) lack of qualified personnel; and (d) lack of information on the DFW, are not having a major effect on slowing development of the DFW program" was not rejected. The descriptive statistics showed these most-identified constraints were not affecting the majority of the contractors in developing a DFW, as documented in Table 12 on page 67.

Research Objectives Reviewed

The research objectives were met. An appropriate population was selected, and there was a good responsiveness

to the initial and final closeout questionnaires. From the initial contact to the final closeout survey, there were variables that could be identified as the factors necessary for a successful DFW program.

The following will be a review of the initial areas of focus relating to the research objectives, along with a short comment as to the results of the determination.

1) Aware of new changes in the law: Most companies were aware that the Workers' Compensation Law had been changed, but were not aware of the specifics of the changes, as documented in the Closeout Contractor Comments in Appendix H, page 154.

2) Interested in improving safety: All companies surveyed were interested in improving safety, but the smaller companies were not aware of what is required to improve safety, as documented in Table 9 on page 60 and also in the Closeout Contractor Comments in Appendix H, page 154.

3) Aware of the new drug-free workplace requirements: Primarily the large companies were aware of the drug-free workplace requirements, and only a small number of the mid-size to smaller contractors were current on the DFW program requirements.

4) Interested in creating a drug-free workplace: Only 28 percent of the contractors interviewed on the closeout questionnaire answered "yes" to question 20, as shown in Appendix F, which asked if any actions had been taken in the last six months regarding a DFW. This is particularly

important when noting that the State of Florida enacted the new Workers' Compensation Law six months prior to the completion of this study.

5) Interested in pursuing Workers' Compensation credits:

Sixty-four percent of the respondents said that the proposed Workers' Compensation rate reduction was a motivation to have a DFW program, but again only 28 percent of the contractors were doing anything with regard to implementation.

6) Communicating drug-free workplace requirements: Twenty-eight percent of the companies surveyed were developing files on the DFW program. This was a very low percentage, considering 98 percent of the companies surveyed stated their top management was committed to a DFW. The communication process is failing on both the State level as to their requirements for a DFW and on the contractor level in communicating the NET requirements to their employees.

7) Training their supervisors with regard to DFW program:

As in the case of communications, employers are not engaged in effective DFW training programs for their supervisors, which in turn stops the process of lower level training. Both Table 9, page 60, and Appendix H show that the State of Florida has not been clear in communicating its requirements for education. As a result, many employers are waiting to see what is going to be required before they start a program that will: (1) cost them money and (2) may not meet State of Florida requirements.

8) Identifying the specific areas that effect the implementation and maintenance of a DFW program:

With the DFW being in the embryo state of development, it is hard to prioritize the specific areas that effect the implementation and maintenance of a DFW program. But as Table 8 on page 55 clearly shows, top managements' commitment is consistent in stating their willingness to have DFW programs. With contractors not understanding important benefits such as the WC rebate and the loss of Workers Compensation benefits due to positive drug testing, it is difficult to make a firm statement as to what will motivate the contractors to implementation. After the DFW program gets some experience, then at that juncture, further analysis would be appropriate and far more meaningful.

Observations in Addition to Research Objectives

There were many side benefits beyond the research objectives that were also derived from this study, which are outlined in Chapter VII, "Conclusions and Recommendations".

(1) Larger contractors, both in dollar volume of construction per year and number of employees, are significantly closer to satisfying the DFW program requirements necessary to receive a Workers' Compensation rebate.

(2) Verbal questionnaire communication had a much higher response rate than written questionnaire communication. The baseline questionnaire, which required a written response, required approximately one hour to properly complete. This

baseline questionnaire also required considerable follow-up on the part of the researcher to receive a response. Yet, the initial contact questionnaire and the closeout questionnaire, both of which were verbal, were effective from the onset. It is clear that a verbal questionnaire has a captive audience thus resulting in more timely data while not sacrificing data credibility.

(3) The monthly exchange technique allowed contractors to receive something tangible and informative which in turn made some of these contractors very responsive to completing their monthly questionnaire. The monthly questionnaire worked well; yet, because it was in written form and had to be mailed, many contractors did not timely return the completed forms.

(4) Contractors indicated, with a 95 percent positive response rate, that they would comply with the requirements of a DFW program if they were mandated by a governing authority. Yet, they also indicated their displeasure with this concept.

(5) There appear to be some variables that are working to create synergy, but it is not yet quantifiable. This synergism "occurs when two or more processes interact so that the product of their effects is greater than the sum of their separate effects. The result of compounded interactions may be an order of magnitude greater than the sum of the component effects" (Myers & Norman, 1989, p.1).

CHAPTER VII CONCLUSIONS AND RECOMMENDATIONS

Introduction

The State of Florida and the Federal Government have both enacted legislation to further the development of DFW programs in the construction industry. The State of Florida is encouraging contractors to develop DFW programs by offering rebates on Workers' Compensation rates, while conversely, the Federal Government is imposing large fines on contractors for violating safety standards promulgated by the Occupational Safety & Health Administration. With these new benefits and/or requirements in place, what is the construction industry's response? Do contractors clearly understand what components are necessary to communicate and develop safety programs and to accomplish DFW programs?

The literature review revealed a variety of studies that have been conducted that examined factors contributing to successful DFW programs and safety programs. Studies that were reported which investigated the experience of individual organizations with DFW programs were not within the construction industry. This research is pioneering in nature as it examines drug-free workplace program implementation experienced in the construction industry. It is also unique

in the sense that the sample involved in the study consists entirely of Associated Builders and Constructors general contractors. The sample of ABC general contractors represented a variety of merit shop contractors. Thus, the ABC contractors are not influenced by the pressures of a labor union.

There were two areas, as shown in Table 9, page 60, that stood out with high positive response in the surveys: (1) top management's strong commitment to a drug-free workplace and (2) top management's commitment to compliance if the drug-free workplace was mandated by a governing authority. Top management is defined in this research as the persons or the group of managers who have the overall control of the company's functions. Although it was shown that larger contractors are more likely to have an active DFW program, which was in agreement with the findings in the literature review, these larger contractors have not been positively influenced by the incentives offered by the State of Florida in its quest to get contractors to develop a DFW.

According to two legal experts in the field of the DFW, Mr. Gordon Dean Rogers, Esquire, and Mr. Robert S. Soloff, Esquire, there are explicit legal liabilities for failure to have a DFW and also definite benefits from having a DFW. With today's construction industry being so entangled in litigation, initiating a DFW program is an area that is relatively cost effective while considering the potential

legal exposure (Rogers & Soloff, 1990).

As data are developed, contractor DFW programs will eventually be able to be analyzed through the use of the Experience Modification Rating and the Occupational Safety & Health Administration Form 200. A company's EMR provides an indication of the dollar loss relating to employee accidents and the OSHA Form 200 provides a record on the number of accidents within the company. Presently, because of the newness of most DFW programs, the data that were obtained through this study show that there was little correlation between the DFW Programs and the EMR and the OSHA Form 200, as referenced in Table 26 on page 85.

The factors that are effecting the implementation of the DFW vary in magnitude of importance. In order to successfully initiate a DFW program, implementation must start with notice and continue with education and testing. Through the model testing, as shown in Figure 3 on page 61, it was found that the contractors that are notifying and testing their employees to comply with the SOFA DFW are not fulfilling the education requirement. At this juncture, the State of Florida's explanation of these educational requirements is vague and non-specific which has left contractors with a lack of direction in this regard. Consequently, contractors are uncertain as to how to develop and execute an educational program, which may have been a key component in leading to their noncompliance.

The large contractors in the construction industry are attempting to communicate the establishment of a DFW within their companies as referenced in Chapter VI. The majority of the contractors surveyed are conducting DFW pre-job orientations as shown in Table 29 on page 95. These contractors are also administering drug testing to new and current employees and communicating the dangers of the use of prescription drugs. Although the small and mid-sized contractors expressed that they were as interested as the large contractors in creating a drug-free workplace, their commitment is not being reflected in their actions.

One controlling item that influenced contractor reaction, particularly in the area of the Monthly Exchange, is the Hawthorne Effect. In this research contractors were put in a spotlight situation wherein they did not want to keep reporting on a monthly basis that they were doing nothing; thus significant changes were observed from the first month to the second month with respect to supervisor training and pre-job orientation. After the large improvement between the first and second months, the Hawthorne Effect did not appear to have any bearing on reporting from the second month to the third, or from the third month to the fourth. This result is not unusual, considering there is only a limited amount of change that a company can cost effectively accomplish in four months. After the initial improvement, it would be a slow process to implement the SOFA DFW program. The closeout

survey may have also been influenced by the Hawthorne Effect. The contractors were aware from the onset that they would be requested to participate in a closeout survey. Realizing that the closeout survey would show what steps, if any, had been taken towards implementing a DFW, contractor actions could have been accelerated. The results of this study indicate that the industry is moving toward a drug-free workplace, but the method to accomplish this end is still very much in question.

Recommendations for Future Research

As this research was conducted, it was evident there were areas that were in need of further research. These areas are identified in the following text.

Consider Synergy Effects on General and Specialty Contractors

The general and specialty contractor groups need to be surveyed with regard to how variables in creating a DFW program can work together to create synergy. Factors such as location, education of work force, trade classification, average age of work force, size of project, and monetary commitment to attaining the DFW may all have an effect in accomplishing the highest degree of synergy.

Specialty contractors differ from most general contractors in that they will often utilize in-house labor force rather than a subcontracted labor force. This in-house labor force has a high potential for exposure to the effects of drugs and the benefits of an effective DFW program.

Company Culture

Construction companies have a company culture that is uniquely the personality of their companies. The special traits of a company need to be analyzed in conjunction with the best method of communication to develop a drug-free workplace. Three steps have been identified in the field of safety for accomplishing this end. It is believed the same three steps would be appropriate for the development of a DFW culture. These safety steps are listed below, with DFW replacing the word safety.

- a) Talk about safety (DFW) on job visits; this sends the message that safety (DFW) is a high priority.
- b) Take the time to attend safety (DFW) functions.
- c) Write personal letters of congratulations to managers who achieve unusually good safety performances (Levitt & Samuelson, 1987).

Size of Sample

Because of the embryonic state of the DFW in the field of construction, a survey population drawn from sources nationwide would be worthwhile, but it should be remembered that Florida is the leader in DFW legislation. Thus, other geographic areas may be considerably behind in such legislation and program implementation.

Behavioral Research

The purpose of this research would be to analyze criteria such as age, sex, weight, economic status, race, handicaps, creed, educational background, and geographic location with respect to a company's involvement in a DFW.

Event Study

This study would involve analyzing the before and after effect of creating a DFW in the states that are coming on line with such legislation.

Construction Industries Versus Other Labor-Intensive Industries

In this research it was found that companies such as Tropicana Products and McDonnell Douglas have statistically proven the value of having a DFW. The basis for this further research would be to determine how these other labor intensive industries equated to the construction industry regarding the DFW.

The Effectiveness of DFW Communication As Evaluated By EMR and OSHA Form 200.

Communication is a vital tool for realizing a DFW as shown in Table 22, page 79, and in Tables 23 and 24, page 81. In cooperation with communication, flexibility is also an essential ingredient in carrying out this process.

If construction managers are to obtain a high level of productivity from their workers, they must have the ability to lead and direct them. Modern leadership theory defines leadership as interpersonal influence aimed at the achievement of specific goals in specific situations. The objective of leader behavior in a business setting is to accomplish corporate goals. A leaders' behavior and communicative ability dictate his or her ability to influence workers. Leadership must relate to specific situations; the action of a leader may have one effect in one situation and a different effect in another (Adrian, 1987, p. 110).

Good DFW Program communication must allow for differing degrees of flexibility, depending upon such variables as

experience and training of the personnel involved. Flexibility is not to be confused with acceptance of illegal drugs or misuse of prescription drugs on the job site, but rather flexibility in communicating with employees.

The success of a company's communication with respect to a DFW will eventually be able to be evaluated through its EMR and OSHA Form 200. With each rating being modified on an annual basis, the correlation between communication and the DFW would require an analysis spanning over several years. The intent of such a study would be to develop a relationship as to how the DFW effects the safety in construction. Similar correlations within other industries have shown conclusively that the DFW has been highly successful in improving safety. According to a study done at the University of Washington, the construction industry employs a maximum of 6.5 percent of the industrial workforce, but has historically accounted for 20 percent of the industrial accidents (Hinze & Talley, 1988). Because of these statistics, the evaluation of the effect of having a DFW is of particular importance.

Conclusion

This study has provided multiple direct and indirect benefits with respect to the DFW in the construction industry. The unique culture within the construction industry has been analyzed and tested with respect to its acceptance and development of the DFW. The techniques for attaining and benefits of a DFW have been delineated to contractors. The

effects of communicating the SOFA DFW have been observed and documented. Along with the information being provided, contractors are being challenged to lead in an area that has a high benefit to not only the construction industry but also to the Nation. As a catalyst for developing DFW programs, this research analyzed and disseminated information regarding the DFW within the construction industry.

The results of this study, both in the descriptive and analytical statistics, have shown correlations among some variables related to the drug-free workplace, but have not revealed any clear conclusive quantitative synergy among them. The DFW is so new in the construction industry that synergy, if present, is in an embryonic state of development. Verbally, through the closeout survey, as documented in Appendix H, page 154, safety managers have stated that they are taking action in their endeavor to create a DFW.

As discussed earlier, synergy is tested by combining different components and observing them to see if they work in a manner whereby the whole is in actuality greater than the sum of the parts. In a medical laboratory, synergy is often tested in an isolated environment which enables one to clearly evaluate the results. However, in the construction industry this laboratory setting is obviously impossible to simulate.

Although the DFW is just starting to take form within the construction industry, this study has clearly identified factors that are imperative for the establishment of effective

DFW programs. The larger contractors have been shown to be the leaders in DFW activity, but even they are having difficulty achieving and understanding certain requirements for a SOFA DFW. The primary problem in meeting the State of Florida requirements for a DFW is the lack of definition by the State regarding the educational requirements. From this research, it is believed, as the requirements for and benefits derived from a DFW become more widely communicated and adopted, the incentive mechanisms will stabilize, bringing uniformity of benefit, and program development will be increased. This research is the pioneering of a subject that intensely affects the construction industry. This dissertation has delved into an area that is of interest and concern to the construction industry, and developed and analyzed data that are the basis for further research.

One of the most important areas that will require further study, in regard to the DFW, is specialty contractors, contractors that often are employed by general contractors. "It is common, particularly on building projects, for over 80 percent of the work to be done by these specialty contractors or subcontractors" (Hinze & Talley, 1988). With this amount of work being performed by subcontractors, the greatest exposure to drugs will also be with these specialty contractors. It is evident that further research should include an analysis on their DFW activities in conjunction with how they relate with general contractors both jointly and

severally to accomplish DFW programs on job sites, as developed in Recommendations for Future Research.

It is the belief of this researcher that the uniform establishment of DFW programs is and will continue to be dependent on financial considerations. In conjunction with monetary concerns, productivity will need to be evaluated. The concept of increasing productivity by the development of a DFW program would be a hypothesis that would not have data for support at this time. Yet, if DFW programs have the same effect as successful safety programs have on construction, productivity will be positively influenced.

As the effect of the historical data is analyzed with respect to the DFW legislation and incentive programs come fully into effect, it will then be possible to make comparisons using the accepted safety evaluators, namely the EMR and the OSHA Form 200. To accomplish such an endeavor, the actions of the contractors, relative to the DFW, would need to be monitored and recorded for a period of time that would allow for demonstrative relationships to be generated and analyzed.

This research has evolved from this researcher's 18 years of involvement and concern with the behavioral aspects of safety. It has been observed by this researcher and supported by this research that contractors have not only neglected to confront the drug abuse problem, and specifically alcohol abuse, but have actually contributed to its abuse. Because of

contractors giving alcohol as a reward for highly productive days, end-goal productivity accomplishments, and successful job completions at topping-out parties, alcohol in some cases has been encouraged and accordingly has become acceptable. This Country's increased legislation pertaining to a DFW and reduced acceptance of drugs and alcohol, will clearly be a positive inducement to help contractors in their implementation of a DFW.

According to Appendix G and Table 9, page 60, the findings of this research showed almost unanimous top management support of a DFW. These findings indicated that the contractors representatives that were surveyed spoke in positive response to one of this study's original concepts, that being: "As a result of recent changes in laws coupled with new methods of construction, the time for modifying procedures with respect to the construction drug-free workplace (DFW) is here."

The information presented in this study will hopefully be a useful contribution to the construction industry. While providing a foundation, it also is hoped that this research will spawn new interests into additional studies that will be used as a basis for further development and attainment of successful DFW programs in the construction industry.

APPENDIX A

INITIAL INTERVIEW AND PREQUALIFICATION FORM

INITIAL INTERVIEW AND PREQUALIFICATION FORM

1. Name of company _____

2. Phone No. _____

3. Company President/CEO _____

4. Co. representative: _____ Position _____

5. Interest in participating in survey	<u>YES</u>	<u>NO</u>
	<u>o</u>	<u>o</u>

6. Commitment to participating in survey	<u>o</u>	<u>o</u>
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7. Annual volume of company _____

8. Yearly average number of construction workers: _____

9. Requirements for participation:

- ☐ (A) Information will need to be provided about company
- ☐ (B) Follow-up reporting will be required (min. Closeout)
- ☐ (C) Accurate information is essential
- ☐ (D) Monthly information may be necessary (if requested)
- ☐ (E) Timeliness of information is imperative

10. In the future, who will be company contact person?

☐ (A) Name of contact person: _____

Position of contact: _____

☐ (B) Name of alternate contact: _____

Position of alternate contact: _____

11. Comments about participation:

Survey conducted by: _____

APPENDIX B

SAMPLE OF BASELINE QUESTIONNAIRE

Construction Worker Safety BASELINE QUESTIONNAIRE

- | | <u>Yes</u> | <u>No</u> | <u>Some</u> |
|--|---|-----------------------|----------------------------------|
| 1. Do you have a full-time Safety Director? | ☐ | ☐ | |
| 2. Is a Safety person designated on each job site? | ☐ | ☐ | |
| 3. Are all injuries reported in writing? | ☐ | ☐ | |
| 4. Are construction workers trained in CPR? | ☐ | ☐ | ☐ |
| 5. Are construction workers trained in First Aid? | ☐ | ☐ | ☐ |
| 6. Do new employees attend a safety orientation? | ☐ | ☐ | ☐ |
| 7. Are injured employees interviewed? | ☐ | ☐ | ☐ |
| 8. Are field supervisors trained for safety meetings? | ☐ | ☐ | ☐ |
| 9. Are project safety inspections conducted? | ☐ | ☐ | ☐ |
| If inspections are conducted: | | | |
| a) What is title of inspector? | _____ | | |
| b) How often are they held? | _____ | | |
| c) How soon after work are they held? | _____ | | |
| 10. What is your Liability Insurance Historical Loss Ratio for the past three years? | | | 19 _____
19 _____
19 _____ |
| 11. What is your Experience Modification Rating (E.M.R.) for the past three years? | | | 19 _____
19 _____
19 _____ |
| 12. What is your method of safety communication? | ☐ Newsletter ☐ Toolbox meeting ☐ Paycheck insert
☐ Special Safety meeting ☐ Guest Lecturers ☐ Management Training
☐ Other, specify: _____ | | |
| 13. How often is safety taught to construction workers? | ☐ Never ☐ Weekly ☐ Biweekly ☐ Monthly
☐ Other, specify: _____ | | |
| 14. What is the educational level of the primary company safety trainer? | ☐ High School ☐ Trade School ☐ Jr.College
☐ 4-year College ☐ Post Graduate
☐ Other, specify: _____ | | |
| 15. What is covered in the safety program? | ☐ OSHA ☐ Liability ☐ Accident Prevention
☐ Other, specify: _____ | | |
| 16. Who teaches safety? | ☐ Safety manager ☐ Lower management ☐ Middle management ☐ Top management
☐ Other, specify: _____ | | |
| 17. How are accident costs maintained? | A) ☐ By the project ☐ By the company as a whole
B) ☐ Monthly ☐ Quarterly ☐ Annually | | |
| 18. How are accident records kept? | A) ☐ By home office ☐ By project manager ☐ By project superintendent
B) ☐ Weekly ☐ Monthly ☐ Quarterly ☐ Annually | | |

19. If you have an orientation program, are the following included?

	<u>Yes</u>	<u>No</u>
a) M.S.D.S (Material Data Information)	☐	☐
b) Drug testing requirements	☐	☐
c) Eye protection	☐	☐
d) Head protection	☐	☐
e) Hearing protection	☐	☐
f) Foot protection	☐	☐
g) Drug Education	☐	☐
h) Lifting/back protection	☐	☐
i) Vehicle startup requirements	☐	☐
j) Toxic materials	☐	☐
k) Emergency procedures	☐	☐
l) Fire protection	☐	☐
m) First Aid training	☐	☐
n) Sanitation	☐	☐
o) Respiratory protection	☐	☐
p) Housekeeping	☐	☐
q) Excavation safety	☐	☐
r) Scaffolding and ladder safety	☐	☐
s) Safety belt and lifeline safety	☐	☐
t) Traffic control	☐	☐
u) Other, specify: _____		

20. Type of work constructed:

- ☐ Non-residential building ☐ H.V.A.C ☐ Heavy construction
☐ Institutional construction ☐ Electrical ☐ Highway construction
☐ Utility ☐ Specialty
☐ Other, specify: _____

21. Who reviews OSHA-200 Accident Reports?

	<u>Yes</u>	<u>No</u>	<u>Monthly</u>	<u>Quarterly</u>	<u>Annually</u>
a) President	☐	☐	☐	☐	☐
b) Operations V.P.	☐	☐	☐	☐	☐
c) Safety department	☐	☐	☐	☐	☐
d) Project managers	☐	☐	☐	☐	☐
e) Supervisors	☐	☐	☐	☐	☐

22. From OSHA-200 Reports:

- a) How many lost work days? _____
 b) How many restricted work days? _____
 c) How many cases requiring medical attention? _____
 d) How many fatalities? _____

Please provide the following when returning this questionnaire:

- a) Copy of company's Safety Policy
 b) Copy of company's Notice of Drug Education & Testing Program
 c) Examples of typical company newsletters
 d) Copies of pre-printed hand-out material on safety
 e) Lesson plans for safety meetings
 f) Copy of injury report form used by company
 g) Give backgrounds of personnel involved in administering safety program
 h) Copy of OSHA-200 report for the past three years

BACKGROUND OF QUESTIONNAIRE REPORTER

Reporting on (Subject): _____

Date of Report: _____

Company Reported on: _____

Company Address: _____

Company Telephone: _____

Name of Reporter: _____

Position w/Co: ☐ Clerical ☐ Entry Mgmt ☐ Mid Mgmt ☐ Top Mgmt

Yrs. Construction Experience: (0 - 2) (2 - 5) (5 - 10) (10 - 20) (Over 20)

Yrs. Safety Experience: (0 - 1) (1 - 3) (3 - 5) (5 - 10) (Over 10)

College Education: (Trade School) (0 - 2) (2 - 4) (4 yr. degree)
(Masters) (Post Grad Work)

Major Area of Study: _____

Minor Area of Study: _____

Biographical Sketch of Reporter (Resume is satisfactory):

APPENDIX C

MONTHLY SUBSTANCE ABUSE MONITORING QUESTIONNAIRE

Construction Worker Safety Monthly Substance Abuse Monitoring Questionnaire

1. Number of active employees in Florida this month. _____

2. Where was substance abuse communicated to employees:

a) newsletter	c) word of mouth
b) safety meetings	d) per job orientation
e) _____	

3. How many inquiries were there this month in Florida?

a) All injuries this month _____
b) Those which required hospitalization _____
c) Those which required doctors care _____
d) Those which required on-the-job minor First Aid _____

4. Was substance abuse a contributing factor in any of the injuries?
If yes, which ones?
a) b) c) d) e) unknown

5. How many lost days were there because of injuries? _____

6. After injury, was there substance abuse testing?

	yes	no
	o	o

7. Who conducted the Substance Abuse Testing?

a) Law enforcement personnel	c) hospital
b) Fire or emergency personnel	d) private lab
e) _____	

8. Has the company prequalified any substance abuse testing laboratories this month?

	o	o
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9. Has any of the following occurred this month?

a) developed a drug-free workplace program	o	o
b) obtained more information about substance abuse	o	o
c) monitored employees exhibiting irregular behavior	o	o
d) provided employees with substance abuse information	o	o
e) trained supervisors in substance abuse awareness	o	o
f) newly-hired employees tested for substance abuse	o	o
g) existing employees tested for substance abuse	o	o

10. Has the rate discount under Florida's new Workers Compensation Law motivated any of the above?
If yes, which ones? a) b) c) d) e) f) g)

	o	o
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11. Has the company implemented any new programs to minimize substance abuse?
If yes, please describe _____

	o	o
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Name of company _____ date of report _____
 Address of company _____ phone _____

APPENDIX D

EXPERIMENTAL GROUP'S EMR AND OSHA 200 RESULTS

Table 31 Contractor EMR Results

Contractor Number	E.M.R.		
	1988	1989	1990
002	.82	.88	.71
005	.80	.49	.68
009	.79	.81	.81
014	.79	.85	.83
037	.51	.34	.50
048	1.06	.93	1.07
049	.89	.89	.85
071	1.00	1.00	n/a
088	.80	.93	n/a
091	.68	.68	n/a
093	.81	.91	.96
098	.91	.94	.97
106	n/a	.75	.75
109	1.09	.89	1.09
127	.86	.86	n/a
130	.84	.86	.79
131	1.08	1.18	.84
132	.75	1.12	1.13
148	1.09	.89	1.09
153	.89	.88	1.05
154	.78	.90	1.00
155	.74	.84	1.15
162	.98	.86	.94
169	.85	n/a	n/a
171	.99	.62	.61
202	1.33	1.68	1.18

Table 32 Contractor OSHA Results

#	O.S.N.A. FORM 200 (Number of Days Affected)											
	1987				1988				1989			
	L	R	M	F	L	R	M	F	L	R	M	F
132	13	9	16	0	881	331	19	0	196	0	46	0
131	n/a	n/a	n/a	n/a	661	0	79	0	57	207	210	0
127	603	32	161	1	1777	195	252	0	1966	250	275	0
002	n/a	n/a	n/a	n/a	27	0	11	0	93	4	14	0
009	0	0	0	0	0	0	0	0	n/a	n/a	n/a	na
005	70	5	114	0	160	16	71	0	213	13	69	0
155	142	15	3	0	n/a	n/a	n/a	n/a	57	0	5	0
014	n/a	n/a	n/a	0	1038	n/a	1643	4	2103	n/a	1759	1
037	n/a	n/a	n/a	n/a	17	0	13	0	15	0	11	0
148	n/a	n/a	n/a	n/a	10	14	13	0	7	11	12	0
153	n/a	n/a	n/a	n/a	131	22	17	0	109	11	16	0
071	n/a	n/a	n/a	n/a	61	0	0	0	19	0	5	0
091	0	0	2	0	0	0	2	0	49	0	4	0
098	n/a	n/a	n/a	n/a	9	0	61	1	5	0	77	0
093	70	106	8	0	61	0	3	0	25	23	4	0
109	n/a	n/a	n/a	n/a	10	14	13	0	8	10	11	0
106	n/a	n/a	n/a	n/a	18	0	0	0	60	0	11	0
162	32	0	8	0	67	63	32	0	39	48	14	0
169	n/a	164	84	0	n/a	187	128	0	n/a	97	76	0
171	8	15	22	0	13	0	14	0	99	10	18	0
130	0	0	0	0	0	0	0	0	0	0	0	0
202	3670	49	59	0	1209	19	24	0	625	0	26	0
048	27	6	20	0	48	0	10	0	510	4	28	0

APPENDIX E

SAMPLES OF MONTHLY INFORMATION PROVIDED

December 8, 1990

Dear Safety Survey Participant:

Thank you for your continued participation and support of this survey. Enclosed is the report update for November. Your prompt completion and return of this form would be greatly appreciated.

From initial review of the baseline questionnaires and telephone interviews, it is clear the drug-free workplace is a goal that most contractors are moving towards.

Our monthly reporting forms are still under evaluation as to how the contractors are becoming involved in establishing a drug-free workplace, but consultants and professional associations are being utilized to provide information in assisting in this area.

Since July, The State of Florida has begun monitoring Workers' Compensation through the establishment of The Workers' Compensation Research and Evaluation Center. Next month, this new department will move into permanent offices at: 1401 S.W. 107th Avenue, Suite 301H, Miami, Florida 32174. Phone #: (305) 225-5902.

Currently, the Center has determined that, of the 86,742 compensable cases reported to the Division of Workers' Compensation in 1988, 15,741 were in the contract construction area. In percentages, construction accounted for 18.1% of the cases and 17.8% of the cost. In upcoming years, we should begin to see the effects of the drug-free workplace on these statistics.

A review of market information compiled by the Center reveals that only approximately 7% of the labor force was involved in construction, which resulted in the highest case per worker ratio of any of the major classifications reported.

Next month's reporting will involve comparisons of survey results submitted thus far. As more information becomes available on the drug-free workplace, we will keep you updated. We look forward to conveying these comparisons to the participants.

Sincerely,

Richard J. Coble
Construction Safety and Loss Control (CSLC)
Research Assistant

Enclosure

January 2, 1991

Dear Safety Survey Participant:

Thank you for being responsive in your monthly reporting, and we look forward to providing timely feedback as this data is received.

As data is being analyzed, some trends are standing out. One of the most obvious is that, of the Baseline Questionnaires received so far, only 10% of the participants have lower current E.M.R.'s than in the previous year.

Another interesting trend is the apparent changes going on regarding safety personnel. 8% of the participating companies have replaced their people that were in charge of safety.

The criteria for meeting the State of Florida requirements for a drug-free workplace have still not been published in the "Florida Administrative Weekly". According to the State, this should happen within the next two weeks. Barring any unexpected legal challenges, the requirements for a drug-free workplace should be in effect by mid- February.

There are still only four HRS-approved laboratories for drug testing. However, the State expects this number to greatly increase by 1992, with the enactment of rate reductions for those employers who have met the requirements for a drug-free workplace.

We have been in contact with the Office of National Drug Control Policy, which is expected to follow much of the same policy as is in place in Florida. Former Governor Bob Martinez, who was instrumental in getting Florida's drug-free workplace requirements into law, is expected to be confirmed as the new Director of this office.

Next month, more statistical information will be available. It is already becoming evident that those companies who have a drug-free workplace are seeing the benefits.

Thank you again for your participation.

Sincerely,

Richard J. Coble
Construction Safety and Loss Control (CSLC)
Research Assistant

Enclosure

On July 1, 1990, the Florida Legislature enacted revisions to Chapter 440, F.S. to permit testing of job applicants, and/or workers under certain conditions, for the presence of drugs exceeding prescribed levels. Specific provisions of the 1990 legislation mandate that the Department of Labor and Employment Security promulgate rules for: drug testing policies, procedures and methods; and the requirements of a drug free workplace program.

Following are some extracts from the proposed rule, 38F-9, touching on specific, pertinent areas.

SUMMARY OF RULE: This rule establishes the procedures and methods for drug testing certain job applicants and workers. the rule provides definitions, notice requirements, collection procedures, testing methods, and test result notification procedures. The rule prescribes the requirements of a drug free workplace program which includes notice, education and drug testing of job applicants and certain employees.

The cost of testing is usually a two-tier price schedule. The price ranges between \$24.00 and \$65.00 for an initial screening test. The price of the confirmation test varies. Some facilities may charge from \$65.00 - \$105.00 per drug or a flat fee for all ten panels.

38F0-9.001 Purpose and Scope

(1) The purpose of this rule is to deter the use of drugs and alcohol in the workplace by establishing standards and procedures for drug testing by employers of their employees and job applicants.

(2) This rule applies to employers who wish to avail themselves of the remedies provided for in the workers' compensation law regarding drug and alcohol testing in the workplace.

(a) If an employer implements a drug-free workplace program as prescribed herein and a worker injured in the course and scope of his or her employment, who is tested pursuant to this rule chapter has a positive confirmation of a drug at a level prescribed herein, such an injured employee forfeits his or her eligibility for medical and indemnity benefits under the Workers' compensation Act upon exhaustion of procedures provided in s.440.102 (5) and the attendant rules contained herein and may be terminated from employment. Additionally, the employer qualifies for reduced rates under s.627.0915.

(b) If an employer does not implement a drug-free workplace program as prescribed herein and a worker injured in the course and scope of their employment who is tested pursuant to this rule chapter has a positive confirmation of drug at a level prescribed herein, a rebuttable presumption is created that the injury was occasioned primarily by the impairment of the worker.

Specific Authority 440.09 (7) (c), 440.010, 440.102 (10), F.S.
Law Implemented 440.09(3), 440.101, 440.102(7), F.S.

(3) Refusal to Test

(a) If an employer implements a drug-free workplace program and an injured worker refuses to submit to a test for drugs or alcohol he forfeits his eligibility for all medical and indemnity benefits and may be terminated from employment or otherwise disciplined by the employer.

(b) In the absence of a drug-free workplace program, if the injured worker refuses to submit to a test for nonprescription controlled substances or alcohol, it shall be presumed in the absence of clear and convincing evidence to the contrary that the injury was occasioned primarily by the influence of a nonprescription controlled substance or alcohol.

Specific Authority 440.09(7) (c), 440.101, 440.102, F.S.
Law Implemented 440.09(7) (a), (b), 440.101, 440.102(4) F.S.
History--New

38F-9.013 Education. To qualify as a drug-free workplace, the employer must:

- (a) maintain a current resource file of provider of employee assistance including alcohol and drug abuse programs, mental health providers and various other persons, entities or organizations designed to assist employees with personal or behavioral problems.
- (b) inform employees and new hires about various employee assistance programs that the employer may have available.
- (c) provide an annual education course to be conducted to assist employees and/or supervisors in identifying personal and emotional problems which may result in the misuse of alcohol or drugs. This course must also include a presentation on the debilitating effects due to the misuse of alcohol or drugs and the legal ramifications of the unlawful use of drugs.

Specific Authority 440.09(7)(c), 440.101, 440.102(10), F.S.
Law Implemented 440.010, 440.102, F.S. History--New

DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICESLICENSED DRUG TESTING LABORATORIES

CEDARS MEDICAL CENTER
1400 NORTHWEST 12TH AVENUE
MIAMI, FLORIDA 33136
CONTACT: DANIEL CULTTER
TELEPHONE: (305) 325-5190

DOCTORS AND PHYSICIANS LABORATORY
801 EAST DIXIE AVENUE
LEESBURG, FLORIDA 34748
CONTACT: GERALD E. MCKOWN, SENIOR DRUG ABUSE SPECIALIST
TELEPHONE: (904) 787-9006
1-800-342-9520

SMITHKLIEN BEECHAM CLINICAL LABORATORY
4225 EAST FOWLER AVENUE
TAMPA, FLORIDA 33617
CONTACT: MARKETING DEPARTMENT
TELEPHONE: (813) 972-7100

TOXICOLOGY TESTING SERVICES, INC.
5426 NORTHWEST 79TH AVENUE
MIAMI, FLORIDA 33166
CONTACT: BOB MCCABE
TELEPHONE: (305) 593-2260
(305) 593-1595

APPENDIX F

CLOSEOUT QUESTIONNAIRE FORM

- 1) **SZ** = SIZE OF COMPANY (AVERAGE YEARLY DOLLAR VOLUME)
- 2) **FW** = AVERAGE NO. OF WORKERS IN FLORIDA IN LAST 6 MONTHS
- 3) **WV** = IS WORK VOLUME IN FLORIDA CHANGING?:
 ___ NC ___ UP ___ DN
- 4) **DF** = HOW IS SUBSTANCE ABUSE AND A DFW COMMUNICATED?:
 ___ NS ___ WM ___ SM ___ JO ___ AL
- 5) **JT** = DOES COMPANY DO PRE-JOB ORIENTATION THAT INCLUDES DFW INFORMATION?
- 6) **NH** = ARE NEW HIRES TESTED FOR DRUGS?
- 7) **PD** = ARE THE DANGERS OF PRESCRIPTION DRUGS COMMUNICATED?
- 8) **ST** = ARE SUPERVISORS TRAINED IN DFW COMMUNICATION?
- 9) **FC** = IS THE COMPANY DEVELOPING FILES ON COMMUNICATING A DFW?
- 10) **RD** = DID RATE REBATES FOR 1992 FOR COMPLIANCE WITH FLORIDA DFW CAUSE THE COMPANY TO TAKE ANY ACTIONS?
- 11) **UF** = DID THIS U.F. SURVEY ASSIST IN YOUR DFW COMMUNICATION?
- 12) **TM** = IS TOP MANAGEMENT COMMITTED TO A DFW?
- 13) **DT** = DOES THE COMPANY DO ANY DRUG TESTING?:
 ___ P ___ R ___ A
- 14) **DR** = DOES THE COMPANY DRUG TESTING COMPLY WITH FLA. HRS REQUIREMENTS?
- 15) **EA** = DO YOUR EMPLOYEES HAVE ACCESS TO ANY EMPLOYEE ASSISTANCE PROGRAMS?
- 16) **NE** = HAS YOUR COMPANY DONE ANYTHING REGARDING NOTIFYING YOUR EMPLOYEES OF DRUG TESTING?
- 17) **MR** = WOULD COMPANY HAVE COMPLIED WITH MANDATORY GOVERNMENTAL DFW REQUIREMENTS?
- 18) **DP** = WILL HAVING A DFW MAKE THE COMPANY MORE PROFITABLE?
- 19) **DI** = WERE RATE INCENTIVES A MOTIVATION FOR THE COMPANY TO HAVE A DFW?
- 20) **DG** = HAS COMPANY DONE ANYTHING IN THE LAST 6 MONTHS REGARDING A DFW?
- 21) **CD** = IS THE COST OF THE PROGRAM SLOWING START-UP OF DFW?
- 22) **TD** = IS TIME NECESSARY TO IMPLEMENT THE PROGRAM SLOWING DFW?
- 23) **QD** = IS LACK OF QUALIFIED PERSONNEL SLOWING DEVELOPMENT OF DFW?
- 24) **LD** = IS LACK OF NECESSARY INFORMATION SLOWING DEVELOPMENT OF DFW?
- 25) **LB** = ARE THE LOSS OF WORKER'S COMPENSATION BENEFITS FOR EMPLOYEES TESTING POSITIVE AFTER AN ACCIDENT A PRIME MOTIVATOR TO INSTITUTE A DFW?

COMMENTS: _____

CLOSEOUT QUESTIONNAIRE**1) SZ = Size of Company (Average Yearly Dollar Volume)**

This question was designed to check against information supplied in the initial contractor contact, and to identify any shift that would effect their pursuit of DFW.

2) FW = Average Number of Workers in Fla. in last 6 Mos.

The answer to this question may indicate how concerned the company is with Workers' Compensation Premiums since more employees means more exposure.

3) WV = Is Work Volume in Florida Changing?

_____NC _____UP _____DN

Volume change may be an indicator as to company concern with Workers' Compensation Premiums and may be a motive or a deterrent to pursuit of a DFW.

4) DF = How is Substance Abuse Communicated?

_____NS _____WM _____SM _____JO _____AL

The Method of communication is of high importance as a component in the synergy evaluation. This will be especially important for the companies who are accomplishing a DFW.

5) JT = Does Company do Pre-Job Orientation that Includes DFW Information?

Pre-job orientation is of high importance as a component in the synergy evaluation. This is a key indicator in a companies pursuit of a DFW.

6) NH = Are New Hires Tested for Drugs?

This is an indication as to the start in many cases of a

DFW. It is also a very important way to keep drug users from being employed.

7) PD = Are the Dangers of Prescription Drugs Communicated?

This is an indicator of going beyond the standard presently set down by the State of Florida for a DFW, but an essential component for a company that desires to have a project workforce not effected by the behavioral changes associated with drugs.

8) ST = Are Supervisors trained in DFW Communication?

This may be an indicator of company's desire to have the company's culture modified to effect a DFW, and is a fundamental consideration for the educational requirement in the State of Florida DFW.

9) FC = Is the Company Developing Files on Communicating a DFW?

This may be an indication as to the first phase of setting up a DFW, also a requirement for the accomplishing of the State of Florida DFW requirements for an EAP.

10) RD = Did Rate Discount for 1992 for Compliance with Florida DFW Cause the Company to Take any Actions?

The State of Florida is offering an incentive program. This question will be a very important indicator as to whether the rate discount will be attaining their desired results.

**11) UP = Did this U.F. Survey Assist in your DFW
Communication?**

This question was designed primarily to see if the exchange concept was effective in communication regarding analyzing the results, yet those involved with the exchange concept would need to be analyzed separately.

12) TM = Is Top Management Committed to a DFW?

Top management's commitment to a Drug Free Workplace would be essential for its success. It is expected most companies will affirm their top management's commitment to a DFW.

13) DT = Does the Company do any Drug Testing?

_____P _____R _____A

Drug testing is basic to even beginning a DFW. The three types of drug testing are: pre-employment, random and after an accident. A company with a SOFA DFW will do all three.

**14) DR = Does the Company Drug Testing Comply with Florida
HRS Requirements?**

This will be a very difficult question for companies to say they comply with since during the study period there were only four laboratories that were State of Florida approved to analyze specimens.

**15) EA = Do your Employees Have Access to any Employee
Assistance Programs?**

EAP's accessibility are basic to the requirements of a

State of Florida DFW. No answer to this question would be a clear indication that the company does not comply with the State of Florida DFW.

16) NE = Has your Company Done Anything Regarding Notifying your Employees of Drug Testing?

_____P _____R _____A

Employer notification is the first phase in accomplishing the NET requirements in having an approved DFW.

17) MR = Would Company have Complied with Mandatory Governmental DFW Regulations?

Mandatory requirements have been the Federal Governments method of accomplishing safety through OSHA. With fines going up seven fold, OSHA is making a strong statement regarding mandatory requirements. Some contractors still choose to disregard these requirements and pay the fine. The intent of this question was to see if contractors would follow government requirements, regarding the DFW, if mandated.

18) DP = Will Having a DFW Make the Company More Profitable?

This is a question designed to have contractors state what motivates them to take action. A positive response regarding this question will possibly have a direct effect on implementation.

19) DI = Were Rate Incentives Motivation for the Company to Have a DFW?

Rate incentives are what the State of Florida is hoping

will motivate contractors to have a DFW.

20) DG = What has Company Done in the Last 6 Months?

The activity of contractors with respect to the DFW in the last six months will give an indication what the contractor has done since the passage of the State of Florida Workers Compensation Amendment.

21) CD = Is the Cost of the Program Slowing Start-up of DFW?

Initial cost is a factor that may be the significant factor in even starting a DFW. Accordingly it is important to know how contractors react to DFW costs.

22) TD = Is the Time Necessary to Implement the Program Slowing Development of DFW?

Time is a factor that contractors value highly. Time usually equated to cost, under the concept that the more time spent on direct job activities the sooner the job will get done, thus increasing profitability.

23) QD = Is Lack of Qualified Personnel Slowing Development of DFW?

Qualified personnel must be made available to communicate the DFW, either through in-house personnel or through consultants.

24) LD = Is Lack of Necessary Information Slowing Development of DFW?

Information dissemination is basic to communication but first the information must be developed. The State of Florida has been slow in getting the rules approved on the

Drug-free Workplace.

25) LB = Are the Loss of a Workers' Compensation Benefits
a Prime Motivator to Institute a DFW?

The loss of Workers' Compensation Benefits for employees testing positive for drugs after an accident was of prime concern to some contractors on the initial contact survey.

APPENDIX G

CLOSE OUT QUESTIONNAIRE SURVEY RESULTS

Table 33 Closeout Survey Results

Contr #	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
132	Y	Y	Y	N	N	Y	N	Y	Y	Y	N	N	Y	Y	Y	Y	N	N	N	N	N	Y
121	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N
127	Y	N	N	N	N	N	N	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	Y	N	N	Y
131	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N	N	Y	N	N	Y
162	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N
150	Y	Y	N	N	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	Y	N	N	N	N	Y
144	N	N	N	N	N	N	N	Y	Y	N	N	Y	N	Y	Y	N	N	N	N	N	N	Y
153	Y	N	N	N	N	N	N	Y	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	Y
2	Y	Y	N	Y	Y	Y	N	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
5	Y	Y	N	Y	N	N	N	Y	Y	Y	Y	N	Y	Y	Y	N	N	N	N	N	N	Y
9	Y	N	N	N	Y	N	Y	Y	Y	N	N	N	N	Y	Y	Y	N	N	N	N	N	Y
148	Y	N	N	N	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	N	N	N	N	N	N
35	Y	N	N	N	N	N	N	N	Y	N	N	N	N	Y	Y	N	N	N	N	N	N	N
37	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	N	Y	Y	Y	N	N	N	N	N	N	N
91	Y	Y	N	N	N	Y	N	N	Y	Y	N	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
98	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N	N	Y
101	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	N	N	N	N	N	N	Y
93	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	N	N	N	N	N
85	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y	N	N	N	N	N
154	Y	Y	Y	N	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	N	Y	N	N	N	N
107	Y	Y	N	N	N	N	N	Y	Y	Y	N	N	Y	Y	Y	N	N	N	N	N	N	N
109	Y	N	N	N	N	N	N	Y	Y	N	N	N	Y	Y	Y	N	N	N	N	N	N	N
169	Y	Y	N	Y	Y	Y	N	Y	Y	Y	N	N	Y	Y	Y	N	Y	Y	Y	N	N	N
171	Y	Y	N	Y	Y	Y	Y	Y	Y	N	N	N	N	Y	N	N	N	Y	Y	N	N	Y
202	Y	Y	Y	N	N	N	N	N	Y	Y	N	N	Y	Y	Y	N	N	N	N	N	N	N
49	Y	Y	N	Y	Y	Y	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N
136	Y	Y	N	N	N	N	N	N	Y	N	N	N	N	N	Y	Y	Y	N	Y	N	Y	N
75	N	N	N	N	N	N	N	N	Y	N	N	N	N	Y	N	Y	N	N	N	N	N	Y
65	Y	N	N	N	N	N	Y	Y	N	N	N	N	N	Y	Y	U	N	U	N	N	N	Y

U = Undecided

NO = No

Y = Yes

Table 34 Closeout Survey Results

Contr #	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
99	Y	Y	N	N	N	N	N	N	Y	N	N	N	N	N	Y	N	N	N	N	N	N	N
105	N	N	N	N	N	N	N	N	Y	N	N	N	N	Y	Y	Y	N	N	Y	N	N	Y
188	Y	Y	N	N	N	N	N	Y	Y	N	N	N	N	Y	U	Y	N	U	N	N	N	Y
189	Y	Y	N	N	N	N	N	Y	Y	N	N	N	N	Y	N	Y	N	Y	N	N	N	N
168	Y	Y	N	N	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	Y	Y	N	N	N	Y
184	Y	N	N	N	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	N	N	N	Y	Y	Y
48	Y	N	N	N	N	N	N	Y	Y	Y	N	Y	Y	Y	Y	U	Y	N	N	N	N	N
114	Y	Y	N	N	N	N	N	Y	Y	N	N	N	N	Y	U	Y	N	Y	N	N	Y	N
200	Y	Y	N	N	N	N	N	N	Y	N	N	N	N	Y	Y	Y	N	Y	N	N	Y	Y
126	Y	Y	Y	N	Y	N	N	N	Y	Y	U	N	Y	Y	Y	Y	N	N	N	N	N	Y
130	Y	N	N	N	N	N	N	Y	Y	N	N	N	N	Y	Y	Y	N	N	N	Y	Y	Y
11	Y	Y	Y	Y	Y	N	N	N	Y	Y	N	Y	Y	Y	Y	N	N	N	N	N	N	N
33	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	Y
71	Y	Y	Y	N	N	N	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	N	N	N	N
73	Y	Y	U	Y	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	N	N	Y
103	Y	Y	N	N	N	N	N	N	Y	N	N	N	N	Y	Y	Y	N	N	N	N	N	N
158	Y	Y	Y	Y	N	N	Y	Y	Y	N	N	Y	Y	U	U	N	N	U	N	N	N	N
185	Y	Y	Y	N	Y	N	Y	N	Y	Y	N	N	Y	Y	Y	Y	N	N	N	N	N	Y
62	N	N	Y	N	N	N	N	Y	Y	Y	U	N	Y	Y	U	N	N	N	N	N	N	N
10	N	N	N	N	N	N	N	Y	Y	N	N	N	N	Y	Y	U	Y	N	N	N	Y	N
12	N	N	N	N	N	N	Y	Y	Y	N	N	N	N	Y	Y	Y	N	N	N	Y	Y	Y
14	Y	Y	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	Y
67	Y	Y	N	N	Y	N	N	Y	Y	N	N	N	N	Y	U	N	N	N	N	N	N	N
78	Y	N	N	N	N	N	Y	N	Y	N	N	N	N	Y	N	Y	N	N	N	N	N	N
163	Y	N	N	N	N	N	N	N	Y	N	N	N	N	Y	Y	U	N	Y	N	N	Y	Y
166	Y	N	N	N	N	N	N	N	Y	N	N	N	N	Y	Y	Y	N	N	Y	Y	N	Y
173	Y	Y	N	N	Y	N	N	Y	Y	N	N	N	N	Y	Y	N	N	Y	Y	N	N	Y
58	Y	N	N	N	N	N	Y	Y	Y	N	N	N	N	Y	Y	N	N	N	Y	Y	Y	N
20	Y	N	N	N	N	N	N	Y	Y	N	N	N	Y	Y	Y	Y	Y	N	N	N	Y	N

APPENDIX H

CLOSEOUT CONTRACTOR COMMENTS

CONTRACTOR COMMENTARY FROM CLOSEOUT QUESTIONNAIRE

114: They are a small company and are meeting with carriers regarding new rates. The company doctor does collection for testing and sends them to a certified lab. They do not have an EAP, but would help employees in getting counseling if needed.

#132: They are very interested in creating a drug-free workplace, but have virtually done nothing except pre-employment drug tests. They are waiting for the AGC to help them with the necessary information to set up the DFW program.

#200: They are a small struggling company. They have a company policy that states if one gets caught using drugs on the job, he or she is terminated. They have not done any drug testing.

#126: This company hires very few crafts. Presently they are not hiring at all because work is down. All new craft applicants will be sent to a company that does testing for a local electrical contractor. Because supervisors attend professional association seminars, they are very aware of DFW issues. Incentives such as rate reductions will impact on their bid costs.

#121: This is a very large national company. A DFW has been in place for three years with comprehensive screening. Every employee receives initial and periodic testing from the Chairman of the Board on down. When applicants for employment test positive, they are not eligible to apply again for six months. Craft applicants are not eligible for 30 days after first testing positive and not eligible for one year if the second test is positive. An employee testing positive is grounds for immediate termination. Testing is also done post-injury. The company has devised an unbiased formula for periodic random testing using the last digit of each employee's Social Security number and the daily Dow Jones Index.

#127: They are holding off developing a program until they see the new SOFA DFW regulations. They are not presently drug testing, but are moving in that direction. They are self-insured and feel regulations are necessary, but believe that the politicians will make it a burdensome process. They

believe that owners do not always understand the impact either. Problems on-site often occur due to subcontractors -- "rent-a-drunk", a problem general contractors can not control.

#131: They have prescription drug logs. If employees test positive, they are terminated until they go through an EAP, after which they will become eligible for rehire. They plan to stay on top of the potential DFW by staying in contact with the University of Florida and their attorney and are including a DFW program in their company policy.

#130: They are a small company and use mostly subcontractors. Substance abuse is sometimes discussed in meetings. Group health covers rehabilitation if an employee needs treatment, but to date no rehabilitation has been necessary. They would look into having a DFW program if incentives were significant.

#162: They do not self perform much work and have long term superintendents. For the last couple of years, a Clearwater narcotics detective has made presentations to superintendents and office staff at safety meetings regarding drugs. They test new heavy equipment hires. They are meeting with carriers regarding new rates. The company doctor does collection for testing and sends them to a certified lab. They do not have an EAP, but would help employees in getting counseling if needed.

136: They are presently taking a "wait and see" attitude about the new provisions. There is a company policy about no tolerance of drugs on the job site but they have little concern about the DFW issues. Their main priority is getting business.

144: They are presently working with their insurance company to plan safety training. Drug testing is done by the sheriff's office.

148: Everyone receives a copy of the company policy. The policy states that if one is caught high on drugs, no test will be administered, he or she will just be terminated. They do not feel they have had any problems with abuse. They would definitely consider a DFW if they were given enough incentive.

150: They are moving into more construction management. They do a lot of municipal work. It is a requirement that they have a DFW policy. They have put similar language into their subcontracts in order that subcontractors comply. They are not doing testing yet, but expect to soon. They have been meeting with WC representatives in this regard.

153: They subcontract 100 percent of their work. They have no injuries. They were unaware of the Workers' Compensation changes but would like to learn about the requirements.

002: They are requiring all employees to sign drug-free workplace employment forms prior to employment. They do their work primarily at the Kennedy Space Center and are committed to the drug-free workplace because of Federal regulations.

009: They have not had problems and have not seen the need for a DFW program. They have a small number of direct-hire employees. Their problem lies with day labor. They might institute drug testing if enough incentive is given. They feel testing will be challenged just as lie detectors were challenged.

#011: Their company has a strong commitment to safety. They have had a drug awareness program in place since 1987 with the company policy posted. All production and field new hires are tested, with consent, and they are required to sign a prescription drug disclosure. Superintendents attend in-house DFW classes. They use Roche labs, yet D.O.T. fleet requirements state they must use NIDA certified labs. They feel Florida and Texas are historically the most chaotic and difficult in terms of Workers' Compensation and hope this is now changing. They might hire a Safety Director for Florida, but do not know when.

010: They are waiting to see what the new rules will be. They hired a labor attorney to advise them but even the lawyer does not have enough information. They are concerned about creating liability problems with unfair practices. Their Workers' Compensation and liability carriers conduct job inspections. They hire almost all subcontractors and are only concerned about direct-hire employees.

012: They are a small company with no injuries last year. They are interested in having a DFW program, yet strongly feel they lack the necessary information. They would like to see the new SOFA DFW rules. The local Chamber of Commerce is in the process of distributing a guideline policy.

014: They are a very large company doing an average of \$175-200 million of work in Florida alone. They have had a program in place for five years. They have created a security division to handle chemical screening. Testing is a separate cost item, post-bid. Owners can agree to pay for testing of new hires, as well as accident and random testing, or they sign a waiver relieving contractor of responsibility. About 75 percent of the owners agree to pay for testing. The policy itself discourages some abusers from even applying for

jobs. In general, the program has led to a safer working environment.

067: Their company does roadwork and underground utilities, and, accordingly uses a great deal of heavy equipment. If people were using drugs, "there would not be problems, there had been deaths". Safety, not cost, is the motivation. They have not had any incidents. Their superintendents are required to attend association seminars. They believe OSHA is a hindrance not a help to them.

033: They have begun drug-screening all new hires in Florida on 2/1/91 and company-wide 2/15/91. They have been kicking around a Drug Awareness Program for five years but have had resistance from management. They feel OSHA puts all responsibility for safety on employers. They believe it is time that the employees also be held responsible. They believe the Workers' Compensation system is bankrupt in Florida.

037: Their employees are required to sign a drug-free workplace commitment form. They have had two serious drug related accidents. Had they known, they would not have hired these employees. When employees test positive, they are terminated immediately. They desire a list of EAPs through which employees with drug abuse problems can seek.

035: They are a small company who subcontracts out most of their work. They have not had any problems to date. They would have to see regulations to determine if such a program would be useful to them. They are going to monitor the State of Florida's program to see if it would be advantageous to them.

#071: They have a reserve deputy sheriff on staff and are active in a professional association. They believe strongly in testing and are surprised more companies do not. Applicants must first pass a drug screening before they can take a physical and then a police check is run as well. The program has been in place two years and they have seen a decrease in turnover and injuries. They feel Workers' Compensation is a "give away" program. They believe the State should bring Workers' Compensation benefits in line with unemployment benefits so that employees concerned about layoffs do not decide to get themselves hurt. They believe there is a need to keep out-of-state companies with lower compensation rates from coming into Florida and under bidding local companies.

#073: Their drivers were the first group targeted for drug-testing since vehicular claims are the most expensive. All new drivers and any current driver suspected of having a

problem are tested. The program initially met with resistance from superintendents, but now they are enthusiastic. Their next group targeted for testing is heavy equipment operators.

#075: They have no crews, only subcontractors. They do not see any in-house problems or need for a DFW program.

#078: They are a small company doing commercial building. They subcontract virtually all their work. They do not see a need to have any kind of DFW program.

#091: All their employees are required to sign pre-employment commitments to a drug-free workplace. Presently, they are not in compliance with the SOFA DFW.

#098: They are basically a self-insured company who pays a fee for incidents if they occur. They have been drug screening for six months. Everyone is required to sign a consent to be tested. They believe it is too early to tell if their DFW program has made any difference.

#099: They are in a somewhat unique situation. They do all high security, defense building. All their policies on safety/drugs are mandated by Federal contract. OSHA does not come on their sites. Federal inspectors do the inspecting for safety along with random searches by military police and K-9 dogs. The slightest foundation for suspicion of drug use is cause for immediate loss of I.D. with no appeal. They do not have the same restrictions for alcohol abuse, which is a much greater problem. They believe the Workers' Compensation system is abused by employees, doctors, and lawyers. They do a background check on new hires to see if the potential employee has a history of making claims.

#101: They have been in business 45 years but instituted a drug/safety program one and one half years ago. They are motivated by the need to reduce claims and to increase productivity. Everyone in the company is tested. They use NIDA certified laboratories.

#093: Most of the employees are long term (10+ years) superintendents. Their top management is people oriented. Each month the whole company goes without incident or down time, and everyone gets five scratch-off lottery tickets. They have had one reportable accident in 14 months. The new hires are on a 90 day probation during which time they can be random tested, and to date, they have not used this option. Their subcontracts include not only the subcontractor's certificate of insurance but also language insisting on drug/safety orientation and testing with noncompliance voiding the subcontract. The company programs are motivated by their desire to provide quality to owners.

#088: They have a very comprehensive safety and substance abuse program and give notice to applicants before they apply for a job that there will be drug testing. All new hires are required to sign a receipt for the information packet and safety handbook. Superintendents attend training sessions with NIDA tapes and other videos. Test samples are sent to NIDA certified Roche labs. All test results go to their Safety Director via a telephone modem. They have EAPs available through a national carrier. If accidents occur, initial treatment and initial Workers' Compensation benefits are supplied. If drug impairment is suspected, the employee's name is turned over to the insurance company.

#103: They subcontract most of their work. They have a drug policy, but it does not include drug testing. They would only implement a SOFA DFW on the advice of their attorney.

#105: They develop their own projects and 98 percent of their workforce is subcontractors. The new DFW provisions have no impact on them. They believe they have no need for a DFW program.

#109: Their DFW program has been in place for over a year. Their motivator to implement a DFW program was to increase productivity and reduce incidents. They use a certified lab for testing. If an employee tests positive, he or she must (1) prove use of a prescription drug and/or (2) retest with a GC/MASPECT test.

#158: They have had a drug awareness program for two to three years. Their superintendents and foremen are trained as they come up through the ranks. They believe when a person is hurt, the person running the job is responsible. Most of their people are long-term. Problems in the Daytona area are mostly with unskilled, transient workers, which hurts the construction business. They believe OSHA is non-cooperative and difficult with which to work. They feel this is why professional associations have become more involved in DFW programs.

#163: They are a small contracting firm using mostly subcontractors and do not see any tangible benefits in having a DFW program.

#166: They have been in business for 24 years. They employ almost all subcontractors. They have not experienced any problems with substance abuse. They feel there is plenty of information available on the DFW for those who need it.

#168: The AGC recently assisted them in writing a new-hire questionnaire and they also wrote a new safety manual. They have few direct employees, mostly subcontractors. They are

interested in learning more about putting DFW compliance language into subcontracts.

#169: They are totally self-insured. They pay fees as injuries happen. Substance abuse, especially alcohol and pot, is common in their workers with around 50 percent to 75 percent of employees involved. Work is slow for them now; they are down to about 175 workers from a high of 800. Previously, they did not have maximum benefits for in-patient treatment, but now they have a ceiling of \$2000, which covers only out-patient care. They feel if drug testing becomes mandatory or tied to rate reductions, there will be cheating. They believe drug testing everyone will not be cost effective for a large company with a big turnover. They believe the reduced rates could not compensate for the cost of testing. Regarding claim denial, they believe proving a connection in court would be difficult because the employer would have to prove the accident could have happened only because the person was impaired.

#173: Their company used to do much of their own carpentry and masonry, and they have had incidents and claims. Now they carry only first and second level supervisors and most of the problems are with the subcontractors and not with their own workers. They believe no one wants to "rat" on anyone else. They believe sometimes it takes an owner's representative to notice something wrong on site. They believe there are too many opportunities to abuse the system. They believe much more education/information on DFW requirements is needed throughout the industry.

#171: They employ mostly superintendents and subcontractors. Most of the questions did not apply to them.

#184: They subcontract everything. Their superintendents know there is zero tolerance for substance abuse. They believe subcontractors should police their own employees. They believe contractors are busy building projects and are not in the social service or mental health business. They believe if a worker is injured because he is using drugs or alcohol, it is not fair for him to collect benefits.

#185: They have a small number of direct employees, mostly long-term but they still drug test new hires. They believe drug use will always bring down quality. Most of the problems are with day labor.

#188: Previously, they had huge premiums when they hired on-site labor. Now they work primarily with specialty subcontractors, but are still concerned about claims prosecution and liability. They consider the problem with enforcement is, "who watches the watchers"? They feel

strongly there should be a much greater awareness of AIDS testing.

#189: They state that most of their employees are long-term with little turnover. They have strong company emphasis on safety. They do not know if the new laws will make a difference. They believe either a worker is safety oriented and does not take chances or he is a risk taker and disregards safety.

#200: They do drug testing by a national lab. Specimens from all collection points are sent to that lab. They feel their DFW was delayed by waiting on the court system and they are waiting to see the new regulations. The Texas Workers' Compensation system was just revamped with new forms and changes in general liability. They state the construction industry is slow to change and slow to accept new ideas because they are concerned about the bottom line.

#049: Presently they subcontract all their work. Their only employees are superintendents. Four years ago, before they changed, they had many accidents that were most likely drug-related. Presently, they have not experienced such problems.

#048: They instituted a post-accident testing three months ago but have not used it yet. They have concerns about the reliability of testing which may be as much as 25 percent unreliable and that the GS/MASPEC is expensive. They believe tradespeople are usually not career-oriented and are mostly hired on an immediate need basis. The new hire testing would require downtime as well as additional cost. They believe many people are waiting to see what will be the requirements. They feel legislators are trying to make one set of regulations work for everyone and believe present regulations will not work for all people. They believe there is a broad spectrum of different kinds of contractor services even within the construction industry. They are concerned with what the cost of bureaucracy will be. They believe there are two phases to cut insurance cost (1) the need to have a safety program and (2) the need to set post-accident procedures to minimize cost.

#058: Their company is moving more into construction management. They are involved with the National Society of Professional Engineers. They feel there is much room for improvement in DFW safety. They are more likely to increase productivity than increase safety. They believe enforcement is a big problem. They believe the Federal approach is wrong; they should reward compliance rather than punish violations with criminal and civil penalties. They believe it was a mistake to make OSHA a policing agency. They believe OSHA is

in a state of disarray; they can never be reached when questions arise. They also believe that when jobs are bid, the contractor's safety record should be a factor, not just price.

#062: They pay all craftspeople through a staffing service that takes care of all Workers' Compensation insurance and screen everyone for drugs before sending them to their company. It is an out-of-state service whose WC rates are lower than in Florida and, accordingly, the savings are passed on to them in lower fees.

APPENDIX I

SURVEY PARTICIPATION POPULATION

CA = INITIAL CALL MO = MONTHLY FOLLOW-UP
 FI = FINAL CLOSEOUT INTERVIEW LOC = LOCATION OF HOME OFFICE

NO	CA	MO	FI	LOC	NO	CA	MO	FI	LOC	NO	CA	MO	FI	LOC
001	D	-	-	GLD	046	R	-	-	GLD	091	Y	Y	Y	GLD
002	Y	Y	Y	SC	047	Y	Y	-	GLD	092	P	-	-	GLF
003	D	-	-	CF	048	Y	Y	Y	SC	093	Y	-	Y	GLF
004	R	-	-	CF	049	Y	Y	Y	GLD	094	D	-	-	CF
005	Y	N	Y	PH	050	Y	N	-	GLF	095	D	-	-	CF
006	D	-	-	CF	051	D	-	-	CF	096	D	-	-	CF
007	R	-	-	GLF	052	D	-	-	NF	097	D	-	-	CF
008	P	-	-	GLF	053	D	-	-	CF	098	Y	N	Y	GLF
009	Y	N	Y	GLD	054	R	-	-	GLF	099	R	-	-	NEF
010	Y	N	Y	GLF	055	D	-	-	GLD	100	D	-	-	GLF
011	Y	Y	Y	CF	056	D	-	-	GLF	101	Y	N	Y	GLF
012	Y	-	Y	GLF	057	D	-	-	CF	102	R	-	-	GLF
013	P	-	-	GLD	058	Y	N	Y	GLD	103	Y	N	Y	GLD
014	Y	N	Y	GLD	059	D	-	-	GLD	104	R	-	-	GLD
015	D	-	-	CF	060	Y	N	-	NF	105	R	-	Y	GLD
016	R	-	-	GLF	061	R	-	-	SC	106	Y	Y	Y	PH
017	P	-	-	GLD	062	Y	Y	N	GLF	107	P	-	-	CF
018	P	-	-	GLD	063	P	-	-	GLF	108	Y	N	-	GLD
019	R	-	-	GLD	064	D	-	-	GLD	109	Y	N	Y	NEF
020	R	-	Y	GLD	065	R	-	Y	GLF	110	D	-	-	CF
021	D	-	-	CF	066	D	-	-	CF	111	D	-	-	CF
022	R	-	-	PH	067	Y	Y	-	SC	112	Y	Y	Y	NF
023	D	-	-	CF	068	P	-	-	GLD	113	Y	N	-	NF
024	D	-	-	GLD	069	P	-	-	GLD	114	Y	Y	Y	NF
025	D	-	-	CF	070	P	-	-	GLF	115	P	-	-	GLD
026	D	-	-	CF	071	Y	Y	Y	GLF	116	Y	Y	-	NF
027	R	-	-	GLF	072	D	-	-	CF	117	P	-	-	GLF
028	P	-	-	PH	073	Y	N	Y	GLF	118	P	-	-	NF
029	P	-	-	PH	074	Y	N	-	GLD	119	P	-	-	GLD
030	R	-	-	NF	075	R	-	-	GLD	120	R	-	-	GLD
031	R	-	-	PH	076	R	-	-	GLF	121	Y	N	Y	CF
032	Y	N	-	GLF	077	Y	N	-	GLF	122	P	-	-	GLD
033	Y	Y	N	GLF	078	Y	Y	Y	GLD	123	R	-	-	NF
034	Y	Y	-	GLF	079	D	-	-	CF	124	R	-	-	GLF
035	Y	N	Y	GLF	080	P	-	-	NF	125	R	-	-	GLD
036	P	-	-	CF	081	R	-	Y	GLF	126	Y	N	Y	GLD
037	Y	N	Y	GLD	082	P	-	-	GLF	127	Y	Y	Y	GLF
038	P	-	-	GLF	083	Y	N	-	NF	128	D	-	-	CF
039	P	-	-	GLD	084	R	-	-	GLF	129	R	-	-	CF
040	R	-	-	CF	085	P	-	-	GLF	130	Y	N	Y	GLF
041	D	-	-	CF	086	Y	N	Y	GLF	131	Y	Y	Y	GLF
042	P	-	-	GLD	087	D	-	-	CF	132	Y	Y	Y	GLF
043	R	-	-	SC	088	Y	N	Y	SC	133	D	-	-	SC
044	P	-	-	CF	089	R	-	-	GLF	134	R	-	-	GLF
045	R	-	-	GLF	090	R	-	-	GLD	135	P	-	-	GLD

CA = INITIAL CALL MO = MONTHLY FOLLOW-UP
 FI = FINAL CLOSEOUT INTERVIEW LOC = LOCATION OF HOME OFFICE

136 R - Y SC	176 P - - GLD
137 R - - GLF	177 Y N - GLF
138 Y N - GLF	178 P - - GLF
139 Y N - GLF	179 P - - GLD
140 P - - GLF	180 D - - CF
141 R - - NF	181 P - - GLF
142 Y Y - GLF	182 R - - SC
143 Y - - GLD	183 R - - GLF
144 Y N Y GLD	184 R - - GLD
145 D - - GLF	185 R - - PH
146 Y Y - GLF	186 Y Y - GD
147 Y Y - GLF	187 Y N Y GLD
148 Y N Y NF	188 R - - NF
149 R - - GLF	189 P - - GLF
150 Y Y Y NF	190 Y N - GLF
151 Y N - NF	191 R - - NF
152 Y Y - GLF	192 D - - CF
153 Y N Y GLF	193 P - - GLD
154 Y N N GLF	194 R - - GLD
155 P - - GLF	195 R - - GLD
156 D - - CF	196 R - - GLD
157 R - - GLF	197 P - - CF
158 Y N Y CF	198 P - - PH
159 R N - CF	199 P - - GLD
160 P - - GLD	200 Y Y Y GLF
161 R - - GLD	201 P - - CF
162 Y - Y GLF	202 Y Y Y CF
163 Y - N GLF	203 D - - CF
166 R - - CF	204 P - - GLD
167 Y N - GLD	
168 Y Y Y GLF	
169 Y Y Y GLD	
170 P - - GLD	
171 Y Y Y CF	
172 Y N - GLD	
173 Y Y Y GLF	
174 D - - CF	
175 Y N Y GLF	

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CF = Central Florida	D = Disqualified (Previous Contact)
GLD = Gold Coast	N = No to Monthly
GLF = Gulf Coast	P = Phone Disconnected
NEF = Jacksonville	R = No Response
NF = North Florida	Y = Yes to Participation
PH = Panhandle	SC = Space Coast

APPENDIX J

VALIDITY SURVEY QUESTIONNAIRE FORM AND RESULTS

VALIDITY SURVEY QUESTIONNAIRE FORM

- 1) JT = DOES COMPANY DO PRE-JOB ORIENTATION THAT INCLUDES DFW INFORMATION?
- 2) DT = DOES THE COMPANY DO ANY DRUG TESTING?
- 3) ST = ARE SUPERVISORS TRAINED IN DFW COMMUNICATION?
- 4) PD = ARE THE DANGERS OF PRESCRIPTION DRUGS COMMUNICATED?
- 5) FW = AVERAGE NUMBER OF WORKERS IN FLORIDA IN LAST MONTHS.
- 6) DI = WERE RATE INCENTIVES MOTIVATION FOR THE COMPANY TO HAVE A DFW?
- 7) JSP = IS A SAFETY PERSON DESIGNATED ON EACH JOBSITE?
- 8) FC = IS THE COMPANY DEVELOPING FILES ON COMMUNICATING A DFW?
- 9) RD = DID RATE DISCOUNT FOR 1992 FOR COMPLIANCE WITH FLORIDA DFW CAUSE COMPANY TO TAKE ANY ACTION?
- 10) TM = IS TOP MANAGEMENT COMMITTED TO A DFW?
- 11) LB = ARE THE LOSS OF A WORKER'S COMPENSATION BENEFIT THE PRIME MOTIVATOR TO INSTITUTE A DFW?
- 12) ANY CLOSING COMMENTS?

Table 35 Validity Survey Results

CONT#	ORIENT	TEST	TRSUP	EDUC	SIZE	WKCOMP	RATEINC	SAFJOB	FILES	REBATE	TMGHT
3	Y	Y	Y	N	300	N	N	Y	Y	N	Y
23	Y	N	Y	Y	144	Y	Y	Y	Y	Y	Y
24	Y	N	N	N	55	N	N	Y	N	N	Y
25	Y	N	Y	Y	20	Y	Y	Y	N	N	Y
26	N	N	N	N	6	N	N	N	N	N	Y
41	N	N	N	N	10	N	N	N	N	N	N
51	Y	N	Y	Y	20	N	Y	Y	Y	N	Y
53	Y	Y	Y	Y	50	N	N	Y	Y	N	Y
55	N	N	Y	N	100	N	N	Y	Y	N	N
57	N	N	Y	Y	110	N	N	Y	Y	Y	Y
59	Y	N	N	N	100	Y	Y	Y	N	Y	Y
79	Y	N	Y	N	15	N	Y	Y	N	N	Y
87	Y	N	N	N	10	N	Y	Y	Y	N	Y
94	Y	N	Y	N	50	N	Y	N	N	Y	Y
96	N	N	N	N	30	N	Y	N	N	N	Y
97	Y	N	N	N	200	N	Y	Y	N	N	Y
111	Y	Y	Y	Y	60	N	Y	N	N	Y	Y
128	Y	Y	Y	N	40	N	Y	N	Y	N	Y
133	Y	Y	Y	Y	10	Y	Y	Y	Y	Y	Y
145	Y	Y	Y	Y	150	N	Y	Y	Y	N	Y
174	N	N	Y	Y	0	N	N	N	N	N	Y
192	Y	N	Y	N	5	Y	Y	Y	Y	Y	Y

APPENDIX K

PROFESSIONAL WORK & INTERVIEWS

Professional Work and Interviews

The following organizations and/or associations were contacted to determine their activity in communicating a drug-free workplace program. The individuals listed below were personally contacted and asked what their organizations were doing to assist in communicating a DFW. They were also requested to send written materials regarding this subject. Part of these materials were incorporated into this overall research.

ASSOCIATED BUILDERS CONTRACTORS OF AMERICA

Phone Number (202) 637-8800
Contact Person: Dennis Cuddy, Safety Director

The ABC has released two manuals relating to DFW Programs, "Drug Abuse in the Work Place" and "Implementing a Substance Abuse Program", originally published in 1985. They are currently in the process of updating these manuals, and possibly incorporating them into one book that will include information on the most current legislation and trends effecting the industry. Areas to be reviewed are benefits of implementing the DFW, as well as the costs and disadvantages of non-compliance.

THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA

Phone Number (202) 393-2040
Contact Person: Pete Chaney, Safety Director

The AGC publishes a manual, "Guide to Drug Free Work Sites", and a guide to the "Drug-Free Work Place Act 1988" (For contractors working under Federal contracts which must

conform to certain guidelines relating to DFW).

AMERICAN SOCIETY OF SAFETY ENGINEERS

Phone Number (708) 692-4121

Contact Person: Char Haguewood, Marketing Assistant

The A.S.S.E. does not at this time have statistical information collected on the subject of drugs in the workplace. The A.S.S.E. does, however, conduct workshops pertaining to the drug-free workplace throughout the United States. The theme for National Safety Week (June 2 - 8, 1991) is "Substance Abuse (Alcohol) - Safety and Sobriety are in Demand."

CENTER FOR EXCELLENCE IN CONSTRUCTION SAFETY

Phone Number (304) 293-3031, x623

Contact Person: Dave Potts

No activities at this time.

CONSTRUCTION LABOR RESEARCH COUNCIL

Phone Number (202) 223-8045

Contact Person: Robert Gasperow, Executive Director

The Construction Labor Research council has a report entitled "Prevalence of Drug Testing" which will be available after March 1, 1991. This report communicates the importance of drug testing. Page four of this report documents that responses to a national survey of organizations providing wage and benefit information to the Construction Labor Research Council indicate that, in 70 percent of all areas, at least some formal system of drug testing is being utilized.

EMPLOYEE ASSISTANCE PROFESSIONAL ASSOCIATION

Phone Number (703) 522-6272
Contact Person: Dick Bickerton

The Employee Assistance Professional Association puts out a set of 24 "Facts Sheets". Some of this information has been incorporated into this research project.

FLORIDA DEPARTMENT OF LABOR
INDUSTRIAL SAFETY AND HEALTH BUREAU

Phone Number (904) 488-3044
Contact Person: Ray Manzo, Division of Safety Program Mgr.

This state agency does not have statistical information available relative to this subject. Still working on the standards to be used. Mr. Manzo suggested contacting U.S. Dept. of Health & Human Services, National Institute on Drug Abuse (NIDA). They have published a guide called "Model Plan for a Comprehensive DFW", Publication # 89-1635.

FLORIDA DEPARTMENT OF TRANSPORTATION

Phone Number (904) 288-6816
Contact Person: Cecil Lopaz, Employee Relations Manager

The Florida DOT does not have statistics relative to this topic as of this writing. They do enforce a drug free workplace statement but have not yet begun a drug testing program. There are several reasons for this:

- 1) "Funds are not yet available to test every employee. Their cost estimate of drug testing each employee is \$40 to \$75 per test per employee.
- 2) In the State of Florida the "confidentiality" problem presents a number of legal ramifications not yet worked

out by the legal system.

- 3) To offer an employee assistance program is very costly and funds are not yet available for this type of assistance to employees.

GENERAL MOTORS CORPORATION

Phone Number (313) 556-4425

Contact Person: Roland Austin, EAP Director

The General Motors Substance Abuse Recovery Program reports there was a 50 percent reduction of on-the-job injuries, a 40 percent reduction in absenteeism, and a 60 percent reduction in claims for sickness and accidents.

GREATER MIAMI CHAMBER OF COMMERCE

Phone Number (305) 350-7700

Contact Person: Betsy Freeman

The Miami Chamber of Commerce does not have any statistical information relative to this topic, but they have been a forerunner in helping private industries develop DFW policies and give seminars on this topic. Ms. Freeman suggested calling Tropicana Products, Inc. which has been gathering information for a study they are working on which has produced statistical information relative to cost of not enforcing a drug-free policy in the work place.

INSTITUTE FOR A DRUG-FREE WORKPLACE

Phone Number (202) 463-5530

Contact Person: Mark A. deBernardo, Executive Director

The IDFW is an affiliate of the U.S. Chamber of Commerce. Comprised of 14 corporate members, representing nearly 700,000 workers, the Institute was established to influence Federal

and state legislation dealing with employer drug abuse prevention programs, to be a clearinghouse for information for employers on drug programs, and to help frame the issues in national debate.

MCDONNELL DOUGLAS CORPORATION

Phone Number (314) 232-2984

Contact Person: Daniel C. Smith, Director, Employee Assistance and Human Resource Risk Management Services

McDonnell Douglas has done an in-house cost/benefit study of the DFW which is rich in information and incorporated in the statistics section of this research. This published report, "Cost Benefit Study" can be obtained from McDonnell Douglas upon request and signing a disclaimer agreement.

NATIONAL SAFETY COUNCIL

Phone Number (312) 527-9381

Contact Person: Terry Miller

The National Safety Council publishes a soft-cover book, "Accident Facts, 1990 Edition" which has statistics related to work accident costs and time lost because of work injuries. However, this report does not include statistics directly related to the costs involved due to drug abuse in the workplace.

U.S. DEPT. OF HEALTH & HUMAN SERVICES
NATIONAL INSTITUTE ON DRUG ABUSE (NIDA)

Phone Number (301) 443-6245

Contact Person: Jim Lipari

1. NIDA has a toll-free phone number 1-800-843-4971: NIDA toll free work place hot line to help businesses develop programs relating to a DFW.

2. They are pushing legislation so the Federal standards will become the private industry standards for a DFW.
3. They have a number of pamphlets designed for small businesses wishing to establish a DFW.
4. They have a number of publications showing the negative effects of employees and employers using drugs in the workplace.
5. The National Clearinghouse for Alcohol Abuse Information has a toll-free phone number: 1-800-729-6686 and a great deal of information relating to a DFW. Several publications are available from Clearinghouse, some of which have been studied and incorporated into this research. Of particular value are the publications entitled, "Economic Cost of Alcohol and Drug Abuse" and NIDA Research Monograph Number 91". Mr. Lipari suggested a series of videos prepared by NIDA and available from the National clearinghouse relating to a DFW. The following are available:
 - a. "Drugs at Work" (Trying to solve the problem of drug use in the workplace).
 - b. "Getting Help" (Regarding Employee Assistance Programs).
 - c. "Drug Testing, Handle with Care" (Issues discussed to determine if company is to have drug testing).
 - d. "Finding a Solution".

All videos are 23 minutes in length. Additionally,

they have a catalog showing a multitude of information relating to this topic.

6. NIDA conducts numerous workshops over the country related to this topic.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

Phone Number (202) 523-8148

Contact Person: Akio Konoshina, Information Specialist

Although it is not the function of OSHA to collect data relevant to the cost saved in creating a DFW, OSHA does offer help in this area. On May 2, 1989, OSHA announced a \$1.75 million grant program to combat workplace drug abuse. This program is designed for non-profit employers and employer representatives to help establish or expand substance abuse programs in the workplace. (Contact Deborah Crawford (202) 523-8151 for more information on this grant). Other aids are available from OSHA regarding drug abuse, which can be ordered through their catalogue entitled "OSHA Publications and Audiovisual Programs."

OFFICE OF THE NATIONAL DRUG CONTROL POLICY

Phone Number (202) 467-9814

Contact Person: Graham Gillette, Assistant Director

This is the policy-making agency of drug control within the Federal Government. Statistical information related to drugs is compiled by the National Institute on Drug Abuse and published by the U. S. Government Printing Office.

RACAL MILGO

Phone Number (305) 846-5075

Contact Person: Jane Lohmeier, Employer Assistance Program Director

After initiating a DFW, Racal Milgo experienced a \$104,000 decrease in the cost of their employee inpatient care related to mental and addiction problems. The report covered the first year of Racal's Employee Assistance Program in comparison to the prior year when there was no EAP offered to employees. Ms. Lohmeier communicated that, although this was not a scientific study, management is sure that the program is saving the company a considerable amount of money.

SOUTHERN BELL

Phone Number (904) 350-3230

Contact Person: Mary Ferrell, Public Relations Director

Southern Bell advised that 86 percent of the employees with substance abuse problems who obtained help from the EAP have remained drug free for two years. This data, covering the employees in Dade and Monroe Counties, communicated that the EAP enabled these employees to improve job performance and maintain their employment with the company.

SUN BANK/MIAMI

Phone Number (305) 579-7003

Contact Person: Roberta Kressel, Employee Assistance Program S.E. Director

Relating to the EAP aspect of the DFW, the Miami Sun Bank division reported an estimated savings of about \$13,000 in direct therapy costs in the first six months of the implementation of their EAP. During this six month period, it

was found that, for every \$1.00 invested in their EAP, SunBank/Miami saved \$4.20.

TROPICANA PRODUCTS, INC.

Phone Number 1-(800)-282-2217 or (813) 746-5896
Contact Person: Mike Cutler

In May 1987, Tropicana Products, Inc., began a study to determine the effects of drugs in the workplace within their corporation. They were able to document that within less than two years lost time accidents were down 89 percent, lost time days were down 74 percent, and labor hours were up 23 percent. Mr. Cutler stated that every employee must consent to a drug test before they are hired. Mr. Cutler communicated that when this policy came into effect in 1987, applications were off 50 percent for the first 60 days at their Ft. Pierce division. There was a 25 percent reduction of employment applications the first year of the program. Other information from this study has been incorporated into this research.

WORKER'S COMPENSATION RESEARCH CENTER OF MIAMI

Closed according to the Tallahassee Office (904) 488-2514. This office provided meaningful statistics prior to their closing, but not in the area of the DFW.

APPENDIX L

REFINEMENT STEPS FOR DRUG-FREE WORKPLACE MODEL

Definition of Variables

The tables contained in Appendix M are designed to show the process of statistical analysis followed to construct the model. Each table will give the statistical results with comments as to their desirability in model development.

With each table is included information regarding the action taken and the results obtained. These actions will lead to the next refinement of the model. The abbreviations used to identify the variables in the Baseline Questionnaire and Closeout Survey results were expanded for the Model Description. Figure 15 defines the variables and lists each by name and abbreviations.

Q#	Abbr.	Variable	Definition
C2	SZ	SIZE	Average # of workers in Florida in the last six months.
C20	DG	DFW	Company's DFW activities in last six months.
C16	NE	NOT	Notification of employee testing.
C13	DT	TEST	Does company do drug testing?
C7	PD	EDUC	Are the dangers of prescription drugs communicated?
B2	JSP	SAFJOB	Is there a designated safety person on each jobsite?
B8	SST	TRSUP	Are field supervisors trained for safety meetings?
C5	JT	ORIENT	Does company do pre-job orientation that includes DFW information
C19	DI	RATEINC	Were rate incentives motivation for the company to have a DFW
C25	CB	WKCOMP	Is loss of workers' comp benefits if testing positive after an accident a prime motivator for company to have a DFW?
C10	RD	REBATE	Did rate rebates for 1992 cause the company to take action?
C9	FC	FILES	Is the company developing files on communicating a DFW?

Figure 15 Definition of All Variables
Regression Analysis

Q = Question
B = Baseline Questionnaire
C = Closeout Survey

Table 36 First Model Regression Estimation Results:
Combined Sample.

Dependent Variable is DFW ₁		
Variable	Coefficient	t-ratio
ONE	-10.21311	-.0622
SIZE	.00205	.9383
NOT	-10.28222	-.0626
TEST	9.64115	.0587
EDUC	-1.08965	-1.0411
SAFJOB	-.12552	-.1038
TRSUP	10.40569	.0633
Sample Size		24
Chi-Square Statistic		4.998
Pseudo-R ²		.157
Correct Model Predictions (%)		.63

₁ see Figure 15 for Variable Definitions

Comments

- Overall fit is poor.
- T-statistics are poor.
- Dependent variable is deemed inappropriate.

Action Taken

- Substitute DFW with another dependent variable
TEST or FILES.
- Add RATEINC and WKCOMP to existing independent variables.

Table 37 Second Model Regression Estimation Results:
Combined Sample. Dependent Variables, TEST vs.
FILES

Dependent Variable = TEST ₁				
Variable	Coefficient	t-ratio		
ONE	-16.17839	-.0362	Sample Size	24
EDUC	-11.35096	-.6392		
SIZE	.19685	1.3677	Chi-Square Statistic	27.417
TRSUP	8.91005	.0199		
ORIENT	7.31062	.3645	Pseudo-R ²	.86
RATEINC	2.99127	.1784		
WKCOMP	-7.75260	-.5633		
Correct Model				
Predictions (%)		.92		
Dependent Variable = FILES ₁				
Variable	Coefficient	t-ratio	Sample Size	24
ONE	-12.33971	-.0456		
NOT	1.72549	1.1355	Chi-Square Statistic	12.386
SIZE	.00048	.2686		
EDUC	1.54012	1.1321	Pseudo-R ²	.38
TRSUP	-1.74961	-.0060		
ORIENT	11.05459	.0985		
RATEINC	1.13444	.8111		
WKCOMP	1.21287	.8690		
Correct Model				
Predictions (%)		.79		

₁ see Figure 15 for Variable Definitions

Comments

- TEST model has better overall fit.
- T-statistics are poor for both models.

Action Taken

- Use TEST Model, initiate standardized residual diagnostics to determine if outliers exist.
- Two outliers are found and discarded. Model is estimated with smaller sample.

Table 38 Third Model Regression Estimation Results:
Combined Sample.

Dependent Variable is TEST ₁		
Variable	Coefficient	t-ratio
ONE	-6.63731	-.0011
EDUC	-58.43164	-.0203
SIZE	.78834	.1422
TRSUP	-17.64137	-.0029
ORIENT	53.65022	.0151
RATEINC	-14.50730	-.0056
WKCOMP	-32.68122	-.0183
Sample Size	22	
Chi-Square Statistic	28.841	
Pseudo-R ²	.99	
Correct Model Predictions (%)	100.	

₁ see Figure 15 for Variable Definitions

Comments

- Overall fit is excellent.
- T-Statistics are poor.

Action Taken

- Irrelevant variables are dropped.

Table 39 Final Model Regression Estimation Results:
Combined Sample

Dependent Variable is TEST ₁		
Variable	Coefficient	t-ratio
ONE	-1.42287	-.9682
SIZE	.09451	1.8174
WKCOMP	-3.55904	-1.6881
Sample Size	22	
Chi-Square Statistic	19.915	
Pseudo-R ²	.69	
Correct Model Predictions (%)	.91	

₁ See Figure 15 for variable definitions

Comments

- Overall fit is good.
- T-Statistics are marginally good.

Action Taken

- Estimate model on validity sample.

Table 40 Final Model Regression Estimation Results:
Validity Sample

Dependent Variable is TEST ₁		
Variable	Coefficient	t-ratio
ONE	-1.48195	-1.9377
SIZE	-.00781	1.2030
WKCOMP	-.39746	-.3134
Sample Size	22	
Chi-Square Statistic	1.734	
Pseudo-R ²	.07	
Correct Model Predictions (%)	.73	

₁ see Figure 15 for Variable Definitions

Comments

- Overall fit is poor.
- T-Statistic for SIZE is marginally poor.
- T-Statistic for WKCOMP is poor.

APPENDIX M

REGRESSION VARIABLE DESCRIPTIVE STATISTICS

Table 41 Descriptive Statistics
Cov. & Cor. based on complete data.

Variable	Mean	Std. Dev.	Skew.	Kurt.	Minimum	Maximum	Cases
SIZE	204.15	508.71	3.985	18.058	5.000	2500.	24
DFW	.37500	.49454	.506	1.214	.0000	1.000	24
NOT	.66667	.48154	-.692	1.438	.0000	1.000	24
TEST	.62500	.49454	-.506	1.214	.0000	1.000	24
EDUC	.37500	.49454	.506	1.214	.0000	1.000	24
SAFJOB	.79167	.41485	-1.406	2.936	.0000	1.000	24
TRSUP	.95833	.20412	-4.491	21.125	.0000	1.000	24
ORIENT	.75000	.44233	-1.130	2.236	.0000	1.000	24
RATEINC	.56250	.49591	-.246	1.062	.0000	1.000	24
WKCOMP	.50000	.51075	.000	.958	.0000	1.000	24
REBATE	.33333	.48154	.692	1.438	.0000	1.000	24
FILES	.41667	.50361	.331	1.068	.0000	1.000	24

Covariance Matrix

	1-SIZE	2-DFW	3-NOT	4-TEST	5-EDUC
1-SIZE	258782.				
2-DFW	67.6603	.244565			
3-NOT	62.5507	.000000	.231884		
4-TEST	71.1658	.163043E-01	.217391	.244565	
5-EDUC	80.1168	-.163043E-01	.000000	.163043E-01	.244565
	1-SIZE	2-DFW	3-NOT	4-TEST	5-EDUC
6-SAFJOB	10.6839	-.543478E-02	.579710E-01	.489130E-01	.380435E-01
7-TRSUP	8.65851	.163043E-01	.289855E-01	.271739E-01	.163043E-01
8-ORIENT	27.5163	.543478E-01	.434783E-01	.760870E-01	.978261E-01
9-RATEINC	-62.1073	.190217E-01	-.217391E-01	.271739E-02	-.896739E-01
10-WKCOMP	57.1630	.217391E-01	-.869565E-01	-.652174E-01	.217391E-01
	6-SAFJOB	7-TRSUP	8-ORIENT	9-RATEINC	10-WKCOMP
6-SAFJOB	.172101				
7-TRSUP	.344203E-01	.416667E-01			
8-ORIENT	.326087E-01	.326087E-01	.195652		
9-RATEINC	-.815217E-02	-.190217E-01	-.543478E-02	.245924	
10-WKCOMP	.217391E-01	.217391E-01	.000000	.543478E-01	.260870
	1-SIZE	2-DFW	3-NOT	4-TEST	5-EDUC
11-REBATE	-42.4855	-.434783E-01	.289855E-01	.000000	.434783E-01
12-FILES	61.4149	.108696E-01	.579710E-01	.760870E-01	.978261E-01
	6-SAFJOB	7-TRSUP	8-ORIENT	9-RATEINC	10-WKCOMP
11-REBATE	.289855E-01	.144928E-01	.000000	.000000	-.869565E-01
12-FILES	.471014E-01	.181159E-01	.108696	.163043E-01	.434783E-01
	11-REBATE	12-FILES			
11-REBATE	.231884				
12-FILES	-.144928E-01	.253623			

<u>Correlation Matrix</u>					
	1-SIZE	2-DFW	3-NOT	4-TEST	5-EDUC
1-SIZE	1.000000				
2-DFW	.268949	1.000000			
3-NOT	.255347	.000000	1.000000		
4-TEST	.282883	.066667	.912871	1.000000	
5-EDUC	.318463	-.066667	.000000	.066667	1.000000
	1-SIZE	2-DFW	3-NOT	4-TEST	5-EDUC
6-SAFJOB	.050626	-.026491	.290191	.238416	.185435
7-TRSUP	.083384	.161515	.294884	.269191	.161515
8-ORIENT	.122287	.248452	.204124	.347833	.447214
9-RATEINC	-.246193	.077563	-.091035	.011080	-.365652
10-WKCOMP	.220007	.086066	-.353553	-.258199	.086066
	6-SAFJOB	7-TRSUP	8-ORIENT	9-RATEINC	10-WKCOMP
6-SAFJOB	1.000000				
7-TRSUP	.406469	1.000000			
8-ORIENT	.177705	.361158	1.000000		
9-RATEINC	-.039626	-.187912	-.024776	1.000000	
10-WKCOMP	.102598	.208514	.000000	.214571	1.000000
	1-SIZE	2-DFW	3-NOT	4-TEST	5-EDUC
11-REBATE	-.173436	-.182574	.125000	.000000	.182574
12-FILES	.239724	.043644	.239046	.305505	.392792
	6-SAFJOB	7-TRSUP	8-ORIENT	9-RATEINC	10-WKCOMP
11-REBATE	.145095	.147442	.000000	.000000	-.353553
12-FILES	.225449	.176227	.487950	.065284	.169031
	11-REBATE	12-FILES			
11-REBATE	1.000000				
12-FILES	-.059761	1.000000			

The covariance matrix and correlation matrix shown preceding are useful in determining how variables relate. These matrixes were derived from the results of the closeout survey and clearly identify the relationship between notice and testing. Using this type of matrix, which was derived using the econometrics program, it will be particularly useful when more time has been allowed for the DFW to be incorporated into the construction industry.

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BIOGRAPHICAL SKETCH

Rick Coble received his Bachelor of Science in Engineering with a major in civil engineering from California Polytechnic College, Pomona, California, on June 7, 1969. From 1969-1971, he was a project engineer for Card Construction. Card Construction Company specialized in underground and heavy construction. From 1971 to 1974 he worked for Walt Disney World initially as a Safety Engineer and in the last two years as a Building Project Manager.

In 1974 he was admitted to the graduate program in building construction at the University of Florida, receiving his Master of Building Construction the summer of that year.

His master's paper and focus of interest was on construction safety.

From 1974-1981 he owned and operated TYCO Construction, Inc. This company did commercial, industrial and underground construction. In 1981 TYCO was merged with Palmer-Smith from Michigan. Jointly the companies did over \$100 million worth of work throughout Florida, with primary emphasis at Walt Disney's E.P.C.O.T. Center.

In 1983 he sold his interest in TYCO and started two firms. The construction consulting firm, WICO Consulting, does consulting work for construction-related clients. The

second firm is a construction company, KACO Contracting Company, which specializes in building heavy and underground construction projects. These companies have worked throughout the southern part of the United States in addition to working in New Jersey and Hawaii.

In the summer of 1988, he was re-admitted to the University of Florida, in pursuit of his Ph.D. He completed his oral and written exams and became a Ph.D. candidate in the College of Architecture in the summer of 1990.

He has taught in the Department of Civil Engineering and the School of Building Construction at the University of Florida. His teaching has also included speaking at seminars and as a guest lecturer in various courses at the University of Florida.

He serves as a member of the board of directors of several companies. He still retains ownership in KACO Contracting Company and WICO Consulting Company, with these companies presently focused on construction and engineering consulting.

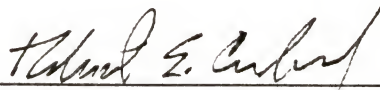
He is a member of the American Society of Civil Engineers. He is also a member of The American Concrete Institute, The American Society of Safety Engineers, and Sigma Lambda Chi Honorary Building Construction Society.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Weilin Chang, Chairman
Professor of Building Construction

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Robert Crosland, Co-Chairman
Professor of Building Construction

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



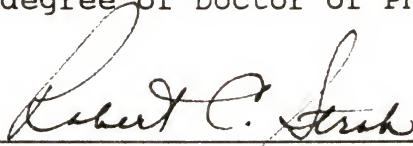
Rodney Cox
Professor of Building Construction

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Ralph Swain
Professor of Industrial and Systems
Engineering

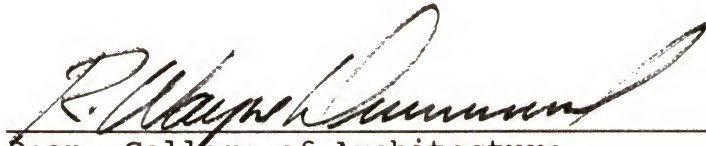
I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Robert Stroh
Lecturer, Building Construction

This dissertation was submitted to the Graduate Faculty of the College of Architecture and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

May, 1992



Dean, College of Architecture

Dean, Graduate School